INTERIOR DEPARTMENT APPROPRIATIONS FOR 1953

MONDAY, APRIL 21, 1952

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to recess, in room F–82, the Capitol, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Senators Hayden, Cordon, Young, and Knowland.

OFFICE OF THE SECRETARY

SOUTHWESTERN POWER ADMINISTRATION

STATEMENTS OF DOUGLAS G. WRIGHT, ADMINISTRATOR; HENRY W. BLALOCK, ASSISTANT TO THE ADMINISTRATOR; FLOYD E. CONWAY, CHIEF, DIVISION OF ENGINEERING; AND WILBUR P. KANE, CHIEF, BUDGET BRANCH

CONTINUING FUND

Senator HAYDEN. The committee will come to order, please.

I think the best way to begin the proceeding is to put the justification in the record. The next item to be considered by the subcommittee is the continuing fund for the Southwestern Power Administration.

Your budget request was $1,425,000, and the House allowed you $231,000.

You are requesting a restoration of $1,194,000.

The justifications for this restoration will be inserted in the record.

(The material referred to follows:)

CONTINUING FUND, SOUTHWESTERN POWER ADMINISTRATION

(Estimate, $1,425,000; act, $250,000)

(House hearings, pt. 1, pp. 79–85)

(P. 4, line 6)

Page 4, line 6, strike out "$231,000" and insert in lieu thereof "$1,425,000," the estimate, or an increase of $1,194,000 in the appropriation.

HOUSE REPORT

"An appropriation of $231,000 is recommended instead of $1,425,000 which was requested. The total budget request was to be used for the purchase of power, the payment of wheeling charges, and the rental of transmission facilities of electric cooperatives and private utilities in the Southwestern Power Administration area. Payments to three of the six organizations, two Oklahoma utility companies and the M. & A. Electric Cooperative, are to cover the costs of wheeling

Government power over their transmission lines to preferred customers. The $231,000 recommended for appropriation is for the purpose of meeting these costs.

"The program proposed to the committee also included the purchase of all power generated by the other three organizations and the rental of all of their transmission facilities. The questions as to whether or not REA allotments to cooperatives can be used for the construction of generating and transmission facilities to be rented in total to the Southwestern Power Administration for the purpose of serving its customers, and the question of Southwestern Power Administration's authority to purchase steam-generated electric power and energy have been placed before the courts. In view of this fact the committee has deferred all funds programed for the purchase of power and the rental of facilities from the Central Electric Power Cooperative and the Show-Me Power Corp. of Missouri and the Western Electric Cooperative of Oklahoma amounting to $1,194,000 in total.

"This action has been taken without prejudice as to the merits of the budget request or the purpose for which the funds were to be used and can in nowise be interpreted as indicative of any attitude on the part of the committee as to the merits of the pending lawsuits. The existing contracts, if any, with these organizations are continuing in full force and effect pending adjudication of the pending suits. However, the committee was advised during the hearings that in any event and without regard to the pending litigation, the funds requested would not be needed to make payments to the three organizations named before January 1953. It is hoped that final decision in the pending cases will be rendered before that time. Under these circumstances, as well as for the reason stated above, the committee has deferred the making of appropriations at this time. There will be opportunity to determine what amounts, if any, may be due after judicial determination of the rights of the parties to the various contracts.

"It should be stated most clearly that the committee does not attempt to prejudge or to take a position for or against either the Government or other parties involved in the matters which have been submitted to the courts. The only purpose in deleting funds at this time is merely to hold the entire matter in abeyance until the courts have had an opportunity to give adequate attention to the controverted issues."

JUSTIFICATION

The amendment restores the reduction of $1,194,000 made by the House in the budget estimate. This amount is distributed to activities as follows:

Activity	Appropriated 1952	Budget estimate, 1953	House bill, 1953	Restoration requested
1. Purchase of power	$100,000	$925,000	$231,000	$694,000
2. Rental of transmission facilities	150,000	500,000	0	500,000
Total	250,000	1,425,000	231,000	1,194,000

A breakdown of the restoration request, by objects of expenditure, follows:

07 Other contractual services, $1,194,000

The restoration of $1,194,000 will enable the Government to meet estimated payments due farmer-owned cooperatives under contractual arrangements for the purchase of power and rental of transmission facilities.

The $231,000 appropriated by the House will meet obligations to be incurred by the Government for purchase of power and service charges under a contract with two Oklahoma private utilities, the Public Service Co. of Oklahoma and the Oklahoma Gas & Electric Co., and for service charges to be paid to the M. & A. Electric Power Cooperative which operates in the State of Missouri.

The deleted amount of $1,194,000 was included in the budget estimate to cover payments to be made as follows:

Organization	Power purchases	Rental of transmission facilities
Central Electric Power Cooperative	$429,000	$248,000
Western Electric Cooperative	265,000	177,000
Sho-Me Power Corp	0	75,000
Total	694,000	500,000

The House Committee on Appropriations recognized the liability of the Government under its contractual relationship with these cooperatives, but in its report to the House it indicated that the disallowance of funds represented a deferral only of actual payment until such time as a judicial determination is had upon lawsuits brought by private utilities in the area which question the legality of the contracts between the Government and the cooperatives. The House appropriated the amount as recommended by the committee.

It is recommended that the full amount of the budget estimate be appropriated by the Senate in order that the just debts of the Government be paid as they accrue. In the event that these contracts be declared illegal, payments would, of course, cease to be made.

HOUSE REPORT

Senator HAYDEN. I think the best way to continue is to read the paragraph from the House report, beginning on page 3, "Continuing fund, Southwestern Power Administration":

An appropriation of $231,000 is recommended instead of $1,425,000, which was requested. The total budget request was to be used for the purchase of power, the payment of wheeling charges, and the rental of transmissions facilities of electric cooperatives and private utilities in the Southwestern Power Administration area. Payments to three of the six organizations, two Oklahoma utilities companies and the M. and A. Electric Cooperative, are to cover the costs of wheeling Government power over their transmission lines to preferred customers. The $231,000 recommended for appropriation is for the purpose of meeting these costs.

WHEELING OF GOVERNMENT POWER

You pay out this $231,000 for wheeling Government power?

Mr. WRIGHT. And for the purchase of power to go with the Government power.

Senator HAYDEN. How much in the way of revenue do you collect after the power is wheeled?

Mr. WRIGHT. Out of this it will amount to at least $2½ million.

Senator HAYDEN. That is to say the wheeling charge would eat up one-tenth of the revenue you take in?

Mr. WRIGHT. Wheeling and the purchase of power, not more than that, and possibly less.

Senator HAYDEN. Again quoting the House report:

The program proposed to the committee also included the purchase of all power generated by the other three organizations and the rental of all of their transmission facilities. The questions as to whether or not all REA allotments to cooperatives can be used for the construction of generating and transmission facilities to be rented in total to the Southwestern Power Administration for the purpose of serving its customers, and the question of Southwestern Power Administration's authority to purchase steam-generated electric power and energy have been placed before the courts.

That seems to be a very clear statement of the issue.

Mr. WRIGHT. There is one exception to that. We do not rent the generating facilities. We purchase the output of the plant, but they operate and own that and the Government has no relation to the generating facilities other than to purchase power from the utility companies.

RENTAL OF TRANSMISSION FACILITIES

Senator CORDON. Do you rent any of their transmission facilities?

Mr. WRIGHT. Yes, we rent them all.

Senator HAYDEN (reading):

In view of this fact, the committee has deferred all funds programed for the purchase of power and the rental of facilities from the Central Electric Power

Cooperative and the Show-Me Power Corp. of Missouri and the Western Electric Cooperative of Oklahoma amounting to $1,194,000 in total.

This action has been taken without prejudice as to the merits of the budget request for the purpose for which the funds were to be used and can in no wise be interpreted as indicative of any attitude on the part of the committee as to the merits of the pending lawsuits. The existing contracts, if any, with these organizations are continuing in full force and effect pending adjudiction of the pending suits. However, the committee was advised during the hearings that in any event and without regard to the pending litigation, the funds requested would not be needed to make payments to the three organizations named before January 1953.

Mr. WRIGHT. That is an exception we will have to take, concerning that.

JUDICIAL DETERMINATION OF POWER CONTRACT

Senator HAYDEN. When we come to that later, please discuss that. [Reading:]

It is hoped that final decision in the pending cases will be rendered before that time. Under these circumstances, as well as for the reasons stated above, the committee has deferred the making of appropriations at this time. There will be opportunity to determine what amounts, if any, may be due after judicial determination of the rights of the parties to the various contracts.

It should be stated most clearly that the committee does not attempt to prejudge or to take a position for or against either the Government or other parties involved in the matters which have been submitted to the courts. The only purpose in deleting funds at this time is merely to hold the entire matter in abeyance until the courts have had an opportunity to get adequate attention to the controverted issues.

Senator Cordon, the budget officer of the Interior Department has submitted this statement which he says has the approval of the Solicitor showing the parties sued. I think it will be proper to place it in the record.

(The statement referred to follows:)

MEMORANDUM TO THE MEMBERS OF THE SENATE SUBCOMMITTEE ON THE DEPARTMENT OF THE INTERIOR

Re: Pending legal proceedings involving certain private power companies and the Southwestern Power Administration.

CIVIL ACTION

In the United States District Court for the District of Columbia.

Kansas City Power & Light Co., St. Joseph Power & Light Co., Missouri Power and Light Co., Missouri Public Service Co., Missouri Gas & Electric Co., Union Electric Company of Missouri, Missouri Utilities Company, Arkansas-Missouri Power Company, Missouri Edison Company, The Empire Electric Co., plaintiffs

v.

Secretary of the Interior, Administrator, Southwestern Power Administration, Secretary of Agriculture, Administrator, Rural Electrification Administration, Secretary of the Treasury, defendants

This action is brought by 10 electric power companies operating in the States of Missouri, Kansas, Arkansas, and Oklahoma against the defendants to enjoin any further action by the defendants in connection with contracts entered into by Southwestern Power Administration and certain federated rural cooperatives in the State of Missouri. Agreements provide for the interchange of power between Southwestern and such cooperatives which own or propose to own their own generating plants and the lease of transmission lines of the cooperatives. The plaintiffs maintain that the defendants are violating section 5 of the Flood Control Act of 1944 and the Rural Electrification Act of 1936.

Action was brought in the United States District Court for the District of Columbia on October 3, 1950. The government presented a motion to dismiss but the motion was denied.

A hearing has been tentatively set for April 28 on motions by both parties to produce documents.

POWER CONTRACTS WITH ELECTRIC COOPERATIVES

RESTORATION OF HOUSE CUT

Senator HAYDEN. Mr. Wright, you have heard the House report which was just read. We would like to have your comments on it.

Mr. WRIGHT. Do you care for me to read this statement that I have here?

Senator HAYDEN. Yes; please read it.

Mr. WRIGHT. The budget estimate of $1,425,000 for the continuing fund was reduced by the House to $231,000. In order that the Government may meet its obligations under contractual arrangements for the purchase of power and rental of transmission facilities from farmer-owned cooperatives, it is recommended that the reduction of $1,194,000 be restored.

I am sure that this committee recalls that the continuing fund was amended by the House and Senate conferees in acting upon the Interior appropriation bill for fiscal year 1952. As so amended the availability of the fund remains unlimited for emergency expenses to insure continuity of electric service and continuous operation of facilities. It was and is limited, however, as to the amount to be expended for purchase of power, service charges, and rentals during each fiscal year. In 1952 the limitation for these activities is $250,000, and the estimate for fiscal year 1953 is $1,425,000.

COOPERATIVES AFFECTED

The $231,000 included in the bill as passed by the House covers estimated power purchases and service charges to be paid to two private utilities, the Public Service of Oklahoma and the Oklahoma Gas & Electric Co., and payment of service charges to the M. and A. Electric Power Cooperative. The disallowance of $1,194,000 was for purchase of power from the Central Electric Power Cooperative and the Western Electric Cooperative estimated at $694,000, and $500,000 for rental of transmission facilities owned by these two cooperatives and like facilities owned by the Sho-Me Power Corp. All payments made under the appropriation arise under contractual arrangements with the several private utilities and cooperatives.

However, in reducing the budget estimate, the House Committee on Appropriations recognized the liability under the contracts entered into with the cooperatives, but indicated that it was deferring appropriation of funds until such time as a judicial determination is had upon lawsuits brought by private utilities in the area attacking the legality of the contracts between Government and the cooperatives.

APPROPRIATION REQUESTED PENDING COURT DECISION

It does not appear to us that withholding payment of an acknowledged debt is a proper position in which to place the Federal Government. It is recommended that the Senate restore the reduction of $1,194,000 with the understanding that should the courts hold the contracts illegal, other arrangements would then be considered.

SOUTHWEST POWER SITUATION

In order for you gentlemen to understand this picture, I think it would be well for me to briefly give you an outline of the power picture in the Southwest and how this thing fits into it.

The operating area is bounded on the southeast by New Orleans, the northeast by St. Louis, Kansas City on the northwest, and San Antonio on the southwest.

Operating in that area are three dams—the Norfork Dam in Arkansas, the Denison Dam between Texas and Oklahoma, and the Narrows Dam in southwest Arkansas.

Senator HAYDEN. There are supposed to be eight dams in this deal.

Mr. WRIGHT. Yes. Those three are operating with a total installed capacity of 157,000 kilowatts.

Senator HAYDEN. What about the other five?

Mr. WRIGHT. Bull Shoals with 160,000 kilowatts coming up in the first unit in June of this year and all of the units by the end of the year.

Then there is the Tenkiller Ferry Dam and the Fort Gibson Dam in Oklahoma, with a total of 80,000 kilowatts which are due to come in in about a year or next March.

There is the Whitney Dam down in Texas, and the Blakely Mountain Dam over in Arkansas with 35,000 and 89,000 kilowatts, respectively, which are due to be in about June of next year.

TRANSMISSION LINES UNDER CONSTRUCTION

In addition to that there is under construction in western Oklahoma by the Farmers' Western Electric Cooperative a steam plant at Anadarko, Okla., of 30,000 kilowatts and a 69,000 kilovolt transmission system covering the western section of Oklahoma.

There is also under construction a 59,000-kilovolt system in central Missouri, running down to Gainesville, Mo., by the Sho-Me Power Corp.

There is a 69,000-kilovolt transmission being constructed west of St. Louis by the Central Power Cooperative and a steam plant at Chamois, of 15,000 kilowatts.

Those are the three transmission systems in question in this continuing fund.

COMPLETION DATE

Senator HAYDEN. When will their construction be completed?

Mr. WRIGHT. They are due to come in in this way: In estimating this $1,425,000 in the budget, we indicated that was equivalent to payments for one-half year under the contract. I think that is where the idea of January 1, 1953, came in.

However, we have this condition: The line from Bull Shoals running north up to Chamois is completed now to Mansfield.

POWER SHORTAGE

There is a power shortage in this Sho-Me power area here, 19 counties, in which there are no private companies, but only this 1 power corporation operating.

We are feeding in from the south of West Plains, Mo., 7,000 kilowatts now. They have to have 3,000 more this summer, or they are going to turn the lights out.

We moved transformers that were scheduled for Doniphan over to Mansfield and made temporary connections. Within 30 days that line and that power will start flowing.

Senator HAYDEN. That is from Bull Shoals?

ACQUISITION OF TRANSMISSION LINES

Mr. WRIGHT. No, from Norfork. When we do that we will have to take over the 154-kilovolt line belonging to the cooperative up to Mansfield.

Senator CORDON. Is that one line in litigation?

Mr. WRIGHT. That is one of the lines about which this contract is questioned.

Senator CORDON. I asked if it is a line with respect to which we had litigation?

Mr. WRIGHT. Yes, sir.

Senator CORDON. Please give me my answers when I ask the questions. I do not want that sort of thing here.

Senator HAYDEN. I believe he said "Yes," Senator.

Senator CORDON. My question I thought was perfectly clear.

Mr. WRIGHT. This particular line would have money to lease and operate on up to July 1 of this year. We have money provided in the House bill to maintain and operate it after July 1, but no money to pay the lease payment after July 1.

In addition to that, the Central-Bull Shoals-Mansfield line coming in on May 1, the remainder of the Central system is due in on January 1, 1953. The Sho-Me system is due in on January 1, 1953.

The Western Electric system over in this western Oklahoma area, about 374 miles of it, is due in on January 1, 1953. The electric power from the Central generating plant is supposed to be available about the 1st of December or the 1st of November of 1952. The power from the Western Electric plant will probably be ready between January and June of next year. That is the best estimate I can give you of when they will be ready.

DENISON DAM POWER DISPLACED

We are in this situation in regard to power in the Southwest. There is now in the Houston area a 50,000 to 60,000 kilowatt deficit for the coming summer. That deficit is to be met by the capacity available in Oklahoma being displaced through the Denison Dam in Texas and on south.

Senator HAYDEN. What is the origin of that power? Is that power generated by the private utilities?

Mr. WRIGHT. We are now feeding half of the Denison Dam into Oklahoma. The utilities are bringing in a new plant out here at Anadarko, Okla. That will displace Denison power which will be moved into Texas and Texas power shipped on south into Houston.

The utilities are making arrangements through the contracts we have with them.

Senator HAYDEN. In other words, you are carrying power generated by the private utilities down into Texas?

POWER CONTRACT

Mr. WRIGHT. We are carrying part of it through this interchange agreement. These are additional developments that have happened since I appeared before the committee last year.

We have a contract with the Texas Power & Light Co. We have had one with the two Oklahoma companies. Under the instruction of the Department starting last October, we entered into negotiations with the 12 private utilities in the Southwest area, and we have completed those negotiations and arrived at a tentative contract agreement which I wish to leave with the committee today providing for almost the same type of arrangment as the Oklahoma contract for all of the remaining utilities in the Southwest power area.

Senator HAYDEN. I think that you had better make a list of them.

Mr. WRIGHT. These include the Arkansas Power & Light Co., the Central Louisiana Electric Co., the Empire District Electric Co., the Gulf States Utilities Co., the Kansas City Power & Light Co., the Louisiana Power & Light Co., the Missouri Power & Light Co., the Missouri Public Service Co., the Missouri Utility Co., the Southwestern Gas & Electric Co., and the St. Joseph Light & Power Co.

Senator HAYDEN. Are any of those contracts with companies that are involved in this lawsuit?

Mr. WRIGHT. Yes, sir.

Senator HAYDEN. When you get through with these pending contracts, agreed to by both sides, all the utilities in your area will be in a contractual relationship with the Southwest Power Administration, except the ones where the lawsuit is?

Mr. WRIGHT. Even those in the lawsuit are included in this contract.

Senator HAYDEN. Then if they made a contract would that in any way obviate the lawsuit?

Mr. WRIGHT. I think it ought to. I do not know that it will. I do not think so.

Senator CORDON. I hope it doesn't, if by "obviate" you mean "dismiss." I think it is time for us to get some law on this question. That is a good way to do it. If it is proper and legal to do this, that is one thing. If it is illegal, let us stop it before we are too far in.

DIFFERENCE BETWEEN POWER CONTRACTS

Senator HAYDEN. What is the principal difference, if any, between these contracts, say, with the Arkansas Power & Light Co. and the Oklahoma company?

Mr. WRIGHT. The principal difference in the contract with 12 companies is they agree to buy, in addition to interchanging, and they make a firm contract to buy all of the power and energy we have surplus at any time above all the requirements we have for our own uses.

It is a firm contract to buy whatever is left over at the time. It gives the Government a market for every kilowatt that comes in.

Senator HAYDEN. The Oklahoma companies do not do that?

Mr. WRIGHT. They agree to buy what they could use.

I only had two other points I wish to make.

If the contracts with the 12 companies are signed and with the completion of that arrangement we will have complete integration in the Southwest. I think it is interesting to note only four power

companies in the area still feel they have a problem with Southwestern, a perfectly proper feeling on their part, but the problem is becoming solved throughout the rest of the area. That will definitely place us in the position that within a year we will be able to predict very accurately to the Congress our ultimate expansion even for the authorized dams that are not under construction now and even for the proposed dams.

The entire picture fits into this integration. With your permission I would like to leave with the committee 25 copies of this M–5–R contract which is a tentative agreement arrived at with the 12 companies.

Senator HAYDEN. We will accept that for committee use only.

Mr. WRIGHT. We also have prepared a document for the use of the committee which is a brief statement of the operations of the Southwest Power Administration which I believe will form a ready reference to any question of why we did any particular act we have done. That is entitled "The History of SPA."

Senator CORDON. How much did the preparation of that propaganda cost?

Mr. WRIGHT. About one man's time——

Senator CORDON. How much did it cost you?

Mr. WRIGHT. My guess is about $1,000 or less.

Senator CORDON. How many did you print?

Mr. WRIGHT. There have been 100 mimeographed up to now. They are not printed.

Senator HAYDEN. Let me get back to the issue raised by the House.

You say there will be no need to do anything about it until the 1st of January?

Mr. WRIGHT. We think before the 1st of January we will need at least $100,000 to operate a section of line up to Mansfield, Mo.

After the 1st of January with the systems coming in we feel we will need the remainder of the money.

EFFECT OF LAWSUIT ON POWER PROGRAM

Senator HAYDEN. In the event the lawsuit goes against the Government, is there any assumption that it would be appealed by the Government, or if it goes the other way, would it be appealed there also?

Mr. WRIGHT. I think definitely it will be appealed to the Supreme Court, whichever way it goes. I think probably it will not be decided by the 1st of January.

Certainly the terms of the authority of what the Government can do with respect to contractual relationships for the purchase of power and payment of wheeling or rental charges will be determined. Some form of contractual arrangement both between the Government and private utilities and the cooperatives will ultimately result because the facilities are useful to all of us.

Senator HAYDEN. If you receive no money to pay the rental of these lines, how are you going to collect anything from the users of the power that you put on the lines?

Mr. WRIGHT. I do not know whether we would be able to collect it, or not. We would probably send them a bill for power and they would send us a bill for the lease.

Whether or not they would pay their lease bill until we paid the power bill, I do not know.

Senator HAYDEN. What is the comparison between the amount you would pay in lease money and the amount of revenue you require by the sale of power? Does it run about the same ratio as you stated here before?

Mr. WRIGHT. I do not think that will be quite so high because of the large block of power we are buying. It would be at least twice, and perhaps four times, as much.

The power bill will be twice as much, and perhaps four times as much, as the lease payment.

Senator HAYDEN. If there were a completed transaction, you would take the lease money and they had paid you for the power that you supplied and you got four times as much money out of the power you supplied as you paid out of the lease money, so the Treasury would not be any worse off; would it?

Mr. WRIGHT. I do not think so.

Senator HAYDEN. Would that have any effect on the lawsuit?

Mr. WRIGHT. I cannot answer that question.

Senator HAYDEN. According to your statement, the people in the area are badly in need of power immediately. Is that right?

Mr. WRIGHT. Yes, sir.

Senator HAYDEN. It will be available during the course of the fiscal year to serve them?

Mr. WRIGHT. That is right.

Senator HAYDEN. And they can be served under this arrangement?

Mr. WRIGHT. That is right.

Senator HAYDEN. If you render that service and the suit goes against the Government, it is then decided you could not make the kind of a contract for this, a lease payment contract which you would be operating under, would any damages accrue against the Government? Would it cost the taxpayers any money?

Mr. WRIGHT. I do not think any damages accrue, but I think you would be placed in the position of having to make some other form of arrangement to serve the power.

The cooperatives might have to operate their own lines and buy power from the Government at a different point and maybe wheel power from the Government over its lines.

Senator HAYDEN. What I wanted to find out is will the Federal Government be in any manner injured if you temporarily carry out this existing contract?

Mr. WRIGHT. In my judgment, no.

Senator HAYDEN. Can you conceive of any way that it would be injured?

Mr. WRIGHT. No, sir.

Senator CORDON. You would be spending that much money and getting nothing for it.

Senator HAYDEN. He says if he spends a million dollars in this operation he will get revenue amounting to $4 million.

Senator CORDON. He would not get any revenue like that.

Mr. WRIGHT. I said initially from $2 million to $4 million.

Senator HAYDEN. You get more revenue than you pay in the lease money.

Senator CORDON. What are you going to have when the decision comes down? That is the point. You can go out and construct anything today without any law and not lose your money if you sell it when you get through.

The question is, Is it legal or not?

Senator HAYDEN. What are you going to do with the power you have available to sell, and what are the people going to do without it who would buy it if they could if the thing was tied up tight?

Mr. WRIGHT. If it was tied up tight and the power did not move, we could not do anything. We would probably go ahead and take the lines if the cooperative would let us have them, knowing we could not pay the lease payment and maintain and operate them.

The House bill provides funds to maintain and operate these lines on which no money is provided to pay the lease payment.

We have the money provided to purchase power from these power plants when they come in. If the cooperative will deliver these facilities to us without payment of the lease, or holding the lease in abeyance, we would be in a position of having an obligation as we construe the contracts until the courts declare they are illegal. If they declare they are illegal, that stops the whole business. We will have to make some other arrangement or the cooperatives will have to go on independently.

Senator HAYDEN. A contract has been entered into. A contract is questioned.

Does the fact that the contract is questioned make it void after a court so decides, Senator Cordon?

Senator CORDON. It is either void or it is not void at this point. Determination is the only thing we lack.

However, everybody is put on notice that the question is in the courts to be determined. The part of caution is to await the determination. You would not buy the land until the suit to acquire title.

ACTION ON POWER PROGRAM PENDING COURT DECISION

Senator HAYDEN. Is there any practical solution of a proposition where power is avilable and needed in a place and this suit may drag along for 2 or 3 years? What is the practical way of meeting this situation?

Senator CORDON. What it is now, I cannot answer. This I know: I know this question was raised, so we need not be in the position we are in now. Those who have made this contract made it with their eyes open on both sides. They knew they were flirting with what could easily be an illegal situation. They had asked Congress for money and it had been denied. They attempted to do by indirection what they could not do directly.

The courts have frowned on that.

Senator HAYDEN. And they should.

Senator CORDON. Where we are now, only a court can determine. Very frankly, I do not know.

Senator HAYDEN. Do you feel it is incumbent upon this committee to work out any interim kind of agreement to do anything that would help this situation? It seems as though it would be a crime to have the power available and have farmers needing it badly, and you simply save a lawsuit.

Senator CORDON. I do not think there is any power available that cannot be marketed today.

Senator HAYDEN. If you did not sell this power to these cooperatives, what would you do with it?

Mr. WRIGHT. It probably would be sold to private utility companies. There is not any way to meet the power situation except to sell the power.

Senator HAYDEN. Would it go to Texas or Arkansas?

Mr. WRIGHT. It would be utilized in other areas.

Senator CORDON. There is one thing we are up against as I see it. We have another year in which we do not ratify this question of contract and that is what I do not like about this thing. We may have gone too far already.

Senator HAYDEN. I think the House makes it clear they were not ratifying anything.

Senator CORDON. What they say in their report cannot change what they do with their appropriations. The report represents at least only a pious hope.

What we want to get at is that so far as I can see if we want to await a decision of the courts with respect to this matter, it would simply mean that for another period of a year the people in the area who might otherwise be served with this particular power will have to get along the same way that they did last year. We would not change the situation. We would not make it any better or worse.

Senator HAYDEN. It seems to me that if I were a farmer and there was power and a transmission line in existence and Congress would not let me have it, I would not like Congress very much.

Senator CORDON. I am willing to take whatever dislike is necessary in connection with trying to get a legal decision. If people do not like that, then they do not like law and the best thing they can do is to go to some other place where they do not have law.

There is one country like that over in Europe.

Mr. WRIGHT. The answer to your question is exactly the same except load growth.

CONTRACT PROVISION CONTINGENT ON ENACTMENT OF APPROPRIATIONS

One other point I wish to tell the committee is that last year in the questions asked by the committee in the debate it was indicated in these particular contracts that we had made arrangements to purchase something that we should not have done by this option. At that time I told the committee it was our own intention to write into these contracts an express provision conditioned upon the approval of Congress.

Those contracts have been amended to include this phrase:

> Exercise the right to purchase the transmission system by the Government under provisions of subsections a and b above, expressly conditioned and contingent upon the Congress appropriating money specifically for the purchase of said transmission lines.

Senator CORDON. Do you believe that adds or takes away from the contract, the purpose of which in the first instance was to set up a contractual arrangement under which the Rural Electrification Administration would be guaranteed the amount of money it invested in REA transmission lines, that money to be paid under the guise of

a contract, but in amounts guaranteed so as to repay the capital investment and thus make the capital investment and the loan economically sound?

Mr. WRIGHT. I do not think it changes that phase of the contract.

Senator CORDON. That is the only part of it that is in question.

Mr. WRIGHT. The option phase of the contract to purchase it at any time during its life is dependent entirely upon the action of Congress.

DOCUMENT ON HISTORY OF SOUTHWESTERN POWER ADMINISTRATION

Senator CORDON. There are one or two other questions.

Who prepared the document of history of SPA?

Mr. WRIGHT. It was prepared by the Reports and Information Section of my office, Mr. Francis McManus.

Senator CORDON. How long has he been engaged in preparing it?

Mr. WRIGHT. It took him 2 weeks, sir.

Senator CORDON. He could not have spent much time in that 2 weeks on any other business.

Mr. WRIGHT. No, sir.

Senator CORDON. I assume, then, he made the maps in the same 2-week period?

Mr. WRIGHT. They were made in the same 2-week period out of regular, standard maps we had already printed up.

Senator CORDON. I would say you have got a good man there if he prepared that in 2 weeks.

Mr. WRIGHT. It was prepared for another purpose.

Senator CORDON. I gather that from reading the first three or four pages. It is a perfect piece of propaganda.

Mr. WRIGHT. I would say——

TERMS OF POWER CONTRACT

Senator CORDON. What basically are the terms of the contract with respect to which you testified?

Mr. WRIGHT. The proposed contract with the 12 companies?

Senator CORDON. Yes.

Mr. WRIGHT. Basically the same terms as the Oklahoma contract with the addition of a section that provides that the companies will buy whatever power capacity or energy we have above the needs of the Government to serve other customers than the companies at all times; that the capacity is brought down to a load factor as low as 15 percent.

Senator CORDON. It would appear to be a very good contract from the standpoint of the Government.

Mr. WRIGHT. Mr. Cordon, I think it is the best contract that was ever negotiated. I do not think I spent enough time on this document here because it is not involved in this question, but this will settle the power question in the Southwest.

Senator CORDON. I suspect you spent enough time solely for this reason: that I know I would not understand it, and I do not know whether my colleagues would have any great understanding after you finish, because we are not experts and you are.

However, I want to try to get into it when we have more time. I hope that I get an opportunity to discuss it with you before you leave.

STATUS OF CONTRACT NEGOTIATIONS

What is the date of the signing of the contract?

Mr. WRIGHT. The contract has not been signed. It is pending in the Department of the Interior for comments and suggestions of the Department. It was filed with the Department on January 21, 1952.

Negotiations are being held in abeyance until we received those comments and suggestions.

Senator CORDON. Did anyone in the Interior Department, including Mr. McPhail, take any part in the negotiations?

Mr. WRIGHT. No, sir.

Senator CORDON. Were the negotiations discussed with him at all?

Mr. WRIGHT. No, sir.

Senator CORDON. Why not?

Mr. WRIGHT. Because the instructions of the Secretary to me and the companies in joint meeting were for us to go out and see what kind of a tentative agreement we could reach and bring it to him, which we did.

Senator CORDON. He gave you no indication whatever with respect to the Department's views to guide you?

Mr. WRIGHT. None whatsoever, and as we got drafts of the contract up, and this is M–5—I do not know how many drafts there are—copies of the drafts were furnished to the Department.

Senator CORDON. Over what period were those drafts furnished?

Mr. WRIGHT. They were furnished from about November 15 to the date of submission of the contract.

Senator CORDON. Of 1950?

Mr. WRIGHT. 1951.

Senator CORDON. This particular draft which you feel is a final draft so far as your negotiations are concerned, was filed with the Department on January 21?

Mr. WRIGHT. It is final in this respect: The companies and Southwestern are in tentative agreement. We realize there will be some wording changes, but no basic changes in the contract.

Senator CORDON. Mr. Chairman, again are we not where we were so many times before?

It is now approaching the 1st of May. Here is a contract, a major portion of which was made by this gentleman here, who is one of the smartest men in this field that it has ever been my pleasure to run into, and he tells us that the contract is the same contract in its terms as an existing contract which has already been considered by the Department. If you will recall, it was considered for months and then finally only brought to a conclusion after we called the Department heads in front of us.

This contract is the same in its terms as that with only one major exception, and that is in favor of the Government.

Even as ignorant as I am in the field of hydroelectric, I readily understand any time that you have got a contract whereby you can sell 15 percent load factor electricity at any price, you have got something.

It is definitely in favor of the Government. Why can we not get some action? It might clear this whole thing for us and we might send them back with funds enough to start this period.

SOURCES OF CONTRACT RECOMMENDATIONS

Mr. WRIGHT. I would like to make one other comment on this contract. This contract was worked out in conjunction with representatives of all the power consumers that would be served under it. Their comments and suggestions were taken into consideration by the companies and me. The resolution by the Southwest Power Advisory Committee, which purportedly represents all REA cooperatives in a large number of municipalities now, unanimously approved this contract in New Orleans some months ago.

In addition to that we have received the comments and suggestions of the Rural Electrification Administration, several points they had, which I believe can be incorporated into the contract.

POWER CUSTOMER PREFERENCES

Along with that I would like to tell you what the contracts we have in existence are doing. Thirty percent of the capacity of Southwestern power is going to preferred customers. Thirty percent of our capacity is all we could serve to preferred customers if we operated independently and sold it all to preferred customers.

In Oklahoma we are serving 8,000 kilowatts to 6 cooperatives, 71,000 people. We are serving 10 towns with 4,000 kilowatts, 18,000 people, and we have the entire output available sold.

The same in the Texas area. We are serving 147,000 REA people, 18,623 kilowatts.

We have contracts available through this integration where in 5 years we will be serving a million and a half farm people, 500,000 municipal people, and the power the companies get is available for industry anywhere in the Southwest on an equal and fair basis.

SETTLEMENT OF CONTRACT DISPUTE CALLED FOR

Senator HAYDEN. The question that Senator Cordon has in mind is as to why the delay in the Department and it also occurred to me.

Mr. WRIGHT. I cannot answer that question, sir.

Senator HAYDEN. We will have to make inquiry of somebody to find out.

Senator CORDON. Mr. Chairman, I hope we can go directly to the Secretary. I have found him a man that you can talk to and he understands straight language. I had hoped Secretary Chapman could come down here before Mr. Wright leaves so that each can have the advantage of any information or advice that the other may have. That was the situation that prevailed before when we were able to work out a contract. I hope we can do that. It should not take too much time and we may be able to advance and settle this whole regrettable controversy.

Senator HAYDEN. I will pursue that further.

OPERATION AND MAINTENANCE BREAKDOWN

Senator CORDON. Do you have a breakdown with respect to $1,400,000?

Mr. KANE. May I suggest that on page 82, part 1 of the House hearings, you will find that we broke that down by the different companies and the cooperatives.

Senator CORDON. Are you constructing any facilities yourself out of that money?

Mr. WRIGHT. No, sir.

Senator CORDON. What is the M. & A. Electric Cooperative?

Mr. WRIGHT. The Missouri and Arkansas Cooperative that owns a section of line shown by this green line running from Poplar Bluff over to the Mississippi River straight east and north up to a point near Cape Girardeau. They have a 10,000-kilowatt Diesel plant connected to the end of that line.

We are going to wheel power and purchase power just like the company contract.

Senator CORDON. I note here the statement in the House report that the money allowed, the $231,000, was for payment to three of the six organizations, two Oklahoma utility companies and the M. & A. Electric Cooperative, and to cover the costs of wheeling Government power over their transmission lines to preferred customers. Is that correct?

Mr. WRIGHT. Yes, sir; and the purchase of firming power from them, if it is necessary.

Senator CORDON. The purchase of the money is to pay the cost of the use of the line for carrying Government power?

Mr. WRIGHT. Yes, sir. They operate the line and deliver it in at one end.

Senator CORDON. I thought I heard you make a statement to the effect that the money that was allowed by the House was for operation of the same lines and owned by the same people who own and operate the lines which you intended to rent.

Mr. WRIGHT. In the $1,500,000 M. & A. budget request, of which $1,450,000 was allowed by the House, were included funds to maintain and operate these lines of the Sho-Me Power Corp., the Central Electric Corp., and the Western Electric Corp. Those funds are still in the bill.

Senator CORDON. The $231,000 is not for those lines?

Mr. WRIGHT. No, sir.

Senator CORDON. I misunderstood you.

The difference between the two operations is that in one instance you pay a wheeling charge and in the other instance you rent the facilities and operate them?

Mr. WRIGHT. That is correct.

Senator CORDON. Is the M. & A. Cooperative one of those that are parties defendant?

Mr. WRIGHT. No, sir; I do not believe they are.

Senator CORDON. Or have they anything to do with the contract?

Mr. WRIGHT. No, sir; I do not believe so.

Senator CORDON. So at this moment there is no litigation affecting the M. & A. transmission system?

Mr. WRIGHT. That is correct.

Senator CORDON. But there is litigation affecting the others which you mentioned which were referred to as rental facilities?

Mr. WRIGHT. Yes, sir.

BREAKDOWN OF CONSTRUCTION COSTS

Senator HAYDEN. I think we had better put in the record the breakdown of construction costs.

(The material referred to follows:)

Southwestern Power Administration, 1953 construction program

Project	Total estimated cost	Program, fiscal year 1952	Amount appropriated to date	Budget estimate, fiscal year 1953	Recommended by committee and approved by House
(1)	(2)	(3)	(4)	(5)	(6)
CONSTRUCTION IN PROGRESS					
Plant interconnection project: Gore switching station	$657,013	$158,050	$642,493	$14,520	$14,520
Extensions to cooperatives, public bodies, and others:					
Western Oklahoma project:					
Tupelo switching station	436,035	301,590	408,335	27,700	27,700
Anadarko substation	1,026,198	397,010	808,378	202,820	202,820
Lindsay-Anadarko line	602,594	85,160	602,594		
Comanche switching station	29,470	29,470	29,470		
Subtotal	2,094,297	813,230	1,848,777	230,520	230,520
Western Missouri project:					
Mansfield to Springfield	543,427		543,427		
Springfield to Carthage	721,654		721,654		
Springfield substation	1,824,408	[1] 932,600	1,383,068	41,340	41,340
Mansfield switching station	108,129	58,000	102,799	5,330	5,330
Clinton substation	1,072,780	[2] 486,230	687,100	355,680	355,680
Carthage substation	1,041,460	[3] 522,000	722,870	293,590	293,590
Subtotal	5,311,858	1,998,830	4,160,918	695,940	695,940
Central-northwest Arkansas project: Ozark substation	579,251	328,550	549,071	30,180	30,180
East-central Texas project:					
Center to Garrison line	285,271	36,420	285,271		
Corrigan to Dibold line	152,447	19,620	152,447		
Center switching station	30,012	3,970	30,012		
Timpson substation	69,931	9,280	69,931		
Corrigan substation	72,216	9,590	72,216		
Lufkin connection	36,929	4,910	36,929		
Nacogdoches connection	36,929	4,910	36,929		
Subtotal	683,735	88,700	683,735		
Southwest Oklahoma project: Relocate Washita River crossing	54,188	6,880	54,188		
System communications and dispatching: Communications and dispatching	298,318	298,318	298,318		
Interconnections with other systems:					
Oklahoma utilities:					
Weleetka substation extension	340,061	205,720	321,161	18,900	18,900
Brown switching station	248,375	29,470	248,375		
Russett substation	506,925	12,290	506,925		
Subtotal	1,095,361	247,480	1,076,461	18,900	18,900
Administration and engineering on contractual arrangements:					
Rural cooperatives	75,000			75,000	75,000
Private utilities	100,000			100,000	100,000
Subtotal	175,000			175,000	175,000
Miscellaneous: Mobile unit substation	177,570	162,630	162,630	14,940	14,940
Total, construction in progress	11,126,591	4,102,668	9,476,591	1,180,000	1,180,000

[1] $482,600 held in budgetary reserve.
[2] $236,000 held in budgetary reserve.
[3] $342,000 held in budgetary reserve.

Southwestern Power Administration, 1953 construction program—Continued

Project	Total estimated cost	Program, fiscal year 1952	Amount appropriated to date	Budget estimate, fiscal year 1953	Recommended by committee and approved by House
(1)	(2)	(3)	(4)	(5)	(6)
NEW CONSTRUCTION AND ADDITIONS					
Extensions to cooperatives, public bodies, and others: Western Missouri project: Springfield warehouse building	$226,700			$206,700	$206,700
Interconnection with other systems: Grand River Dam authority:					
Fort Gibson to Okay line	136,100			124,100	124,100
Fort Gibson substation	566,800			509,200	509,200
Subtotal	702,900			633,300	633,300
Miscellaneous construction	1,377,077	$977,077	$977,077	400,000	400,000
Plans and specifications for future program	230,000	50,000	130,000	100,000	100,000
General plant and equipment	1,698,271	500,000	1,198,271	500,000	500,000
Total, new construction	4,234,948	1,527,077	2,305,348	1,840,000	1,840,000
Grand total, construction	15,361,539	5,629,745	11,781,939	3,020,000	3,020,000
Add: Liquidation cash		600,000	600,000	1,130,000	1,130,000
Subtract: Balance from prior years		[2,854,745]			
Total, appropriation or estimate	15,361,539	3,375,000	12,381,939	4,150,000	4,150,000

POWER DISBURSEMENT BREAKDOWN

Mr. WRIGHT. I will leave with the committee a breakdown, 25 copies, of what we are doing with our power.

I think it is important for this reason: 30 percent of our power is being delivered to preferred customers. I believe that is as high a percentage as any hydro system in the country and all the rest of the power we generate is available for industrial development through the integration with private utilities and other co-ops.

(The material referred to follows:)

Preferred customers served by Southwestern Power Administration under contract with the 2 Oklahoma utility companies

	Kilowatts	Estimated number of people served
1. Cooperatives:		
Canadian Valley Electric Cooperative	1,700	11,650
Choctaw Electric Cooperative	1,200	12,240
East Central Electric Cooperative	400	4,000
Kiamichi Electric Cooperative	1,200	11,360
Peoples Electric Cooperative	2,400	20,800
Southeastern Electric Cooperative	1,200	11,600
(6) Subtotal	8,100	71,650
2. Municipalities:		
Clarksville	900	3,200
Crescent	300	1,300
Eldorado	460	760
Lexington	110	1,175
Purcell	650	4,500
Ryan	225	1,200
Skiatook	450	1,600
Spiro	350	1,050
Wetumka	400	2,340
Yale	350	1,400
(10) Subtotal	4,195	18,525
3. Army installations: Fort Sill	4,000	
4. Total	16,295	90,175
5. Total load that can presently be served	17,677	
6. Balance available for load growth	1,382	

Preferred customers served by Southwestern Power Administration under contract with Texas Power & Light Co.

	Kilowatts	Estimated number of people served
1. Cooperatives:		
Fannin County Electric Cooperative	950	14,800
Gayson-Collin Electric Cooperative	1,550	17,600
Farmers Electric Cooperative	1,825	20,800
Deep East Texas Electric Cooperative	2,600	14,000
Hunt-Collin Electric Cooperative	400	5,200
Kaufman County Electric Cooperative	1,300	14,800
Brazos River Transmission Electric Cooperative	10,000	60,000
2. Total	18,625	147,200
3. Total load that can be presently served	20,000	
4. Balance available for load growth	1,375	

Preferred customers served by Southwestern Power Administration under contract with the Southwestern Gas & Electric Co.

	Kilowatts	Estimated number of people served
1. Cooperatives:		
Wood County Electric Cooperative	2,000	12,000
Upshur Rural Electric Cooperative Corp	1,015	6,000
Panola-Harrison Electric Cooperative	150	900
2. Total	3,165	18,900
3. Total load that can presently be served	5,000	
4. Balance available for load growth	1,835	

Southwestern Power Administration power sales report

FEBRUARY 1952

Customer	Delivered to customer		Withdrawn from company to serve preferred customers		Revenue from company	Revenue from preferred customers	Total revenue
	Maximum send-out, kilowatt	Energy, kilowatt-hour	Summation demands kilowatt	Energy, kilowatt-hour			
Texas Power & Light Co	36,000	4,983,000	13,177	4,522,719	$26,661.77	$25,094.63	$51,756.40
Oklahoma companies	21,000	4,000,000	10,875	3,559,045	−115.95	20,217.43	20,101.48
Denison project total		8,983,000					71,857.88
Arkansas Power & Light Co	66,375	22,102,082			104,443.96		104,443.96
Preferred customers	10,828	4,654,000	[1]	[1]		25,477.80	25,477.80
Norfork project total		26,756,082					129,921.76
Southwestern Gas & Electric Co.	17,172	2,448,490	2,049	871,800	11,661.60	4,587.20	16,248.80
Narrows project total		2,448,490					16,248.80
Total all projects		38,187,572					218,028.44

MARCH 1952

Texas Power & Light Co	38,000	1,948,000	13,145	4,568,539	$26,496.09	$24,929.91	$51,426.00
Oklahoma companies	21,000	4,000,000	11,035	3,566,966	−413.73	20,348.11	19,934.38
Denison project total		5,948,000					71,360.38
Arkansas Power & Light Co	66,047	36,820,257			123,022.60		123,022.60
Preferred customers	10,719	4,567,000	[1]	[1]		24,920.25	24,920.25
Norfork project total		41,387,257					147,942.85
Southwestern Gas & Electric Co.	17,388	5,298,770	3,191	1,210,520	9,493.32	6,582.83	16,076.15
Narrows project total		5,298,770					16,076.15
Total all projects		52,634,027					235,379.38

[1] Served direct.

Municipal power cost reduction

SPA SERVICE UNDER OKLAHOMA COMPANIES CONTRACT

Municipality	Service began	Months of service	Reduction in power cost	
			Accumulated	Average monthly
Clarksville, Ark	Apr. 20, 1951	11	$16,148	$1,468
Spiro, Okla	do	11	14,746	1,340
Wetumka, Okla	May 7, 1951	10½	15,261	1,450
Skiatook, Okla	July 6, 1951	8½	11,700	1,376
Crescent, Okla	Sept. 20, 1951	6	4,869	811
Purcell, Okla	Dec. 20, 1951	3	3,233	1,078
Yale, Okla	Jan. 21, 1952	2	2,945	1,473
Lexington, Okla	Feb. 22, 1952	1	549	549
Eldorado, Okla	Mar. 20, 1952	[1]		[2] 339
Ryan, Okla	do	[1]		[2] 663
Total			69,451	10,547

SPA SERVICE THROUGH GOVERNMENT FACILITIES

West Plains, Mo	May 28, 1950	22	$131,066	$5,958

[1] Less than 1 month.
[2] Estimated.

GOVERNMENT HYDRO POWER SUPPLY

Senator CORDON. How much hydro power do you receive from the Government?

Mr. WRIGHT. 157,000 kilowatts of capacity. That is firmed at about a 30 percent load factor.

Senator CORDON. How is it firmed?

Mr. WRIGHT. The water available will give you about a 30 percent output from three projects, 200 hours a month production.

Senator CORDON. You receive it at the dam and generally speaking, do you receive it at a 30 percent load factor?

Mr. WRIGHT. Yes, sir. In the case of the Narrows project we receive it at about a 10 percent load factor.

I might say we are getting an average of about 8 mills kilowatt-hour for every kilowatt-hour produced by that plant under our contract with the Southwestern Gas & Electric Co., 25 million kilowatt-hours and $7,000 a year flat payment for it.

Senator CORDON. That is better than Fort Knox.

Mr. WRIGHT. They use it for seasonal peaking. It is very valuable to them.

Senator HAYDEN. In that connection the demands for power you receive for peaking purposes from the private utilities are supplied at certain hours of the day?

Mr. WRIGHT. Yes, sir.

Senator HAYDEN. In that way you stretch the use of the water out over a longer period of time than if you were to try to generate firm power yourself?

Mr. WRIGHT. Yes. The Texas Co. purchased 4,900,000 kilowatt-hours in February and only 1,900,000 kilowatt-hours in March of this year. That is how much variation there is in the use they make of the Denison plant for peaking purposes.

Senator HAYDEN. You can turn the water on and off.

Mr. WRIGHT. In accordance with their generating schedule.

Senator CORDON. Why would that situation exist there with respect to a company whose own generation I assume to be steam?

I can understand a low load factor use, but I cannot understand it varying that much at different times of the year.

Mr. WRIGHT. They have that type of load that comes on and they figure it in also with their maintenance program. That makes for the variation in March. We have our high months July, August, and September, because of air conditioning, cotton ginning, and rice pumping.

GENERAL PROVISIONS

PROPOSED AMENDMENT ON STEEL PLANT SEIZURE

Senator KNOWLAND. Mr. Chairman, I have an amendment which I intend to propose to this bill and a similar amendment will be proposed to other appropriation bills reading somewhat as follows:

The bill making appropriations for the Department of Interior for the fiscal year ending June 30, 1953, available: no part of any appropriation contained in this act or any funds made available for expenditure by this act, shall be used for the purpose of acquiring, seizing, or operating any plant, facility, or other property unless the acquisition, seizure, or operation of such plant, facility, or other property is authorized by act of Congress.

It has no particular relation to this matter, but it does to the steel seizure and, of course, other industries might be seized and placed under the Secretary of the Interior as the steel industry has been placed under the Department of Commerce.

Senator HAYDEN. You propose a suspension of the rules and inclusion of this in the bill?

Senator KNOWLAND. I do not believe that will be required in this because this is a limitation only on this particular bill unlike the situation on the floor where on the supplemental bill we are proposing a limitation not only in the current bill, but also on all bills which have been heretofore passed.

This is, I believe, under the rules of the Senate merely a limitation on the Interior bill for the fiscal year ending June 30, 1953.

So I wanted the record to be clear it would be offered. We are not picking out the Interior Department alone, because the same amendment will be offered to every other major supply bill.

Senator HAYDEN. Thank you, Mr. Wright.

BONNEVILLE POWER ADMINISTRATION

CONSTRUCTION

STATEMENT OF PAUL J. RAVER, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION; AND SOL E. SCHULTZ, CHIEF ENGINEER, BONNEVILLE POWER ADMINISTRATION

RESTORATION OF HOUSE CUT

Senator HAYDEN. The next amendment requested by the Department relates to the construction program of the Bonneville Power Administration.

The budget estimate was $70,286,400, and the House allowed $66,523,400, a cut of $3,763,000.

You are asking that $1,173,000 of this cut be restored.

I will ask that there be inserted in the record at this point the justification dealing with this request.

(The material referred to follows:)

CONSTRUCTION, BONNEVILLE POWER ADMINISTRATION

(Estimate, $70,286,400; act, $67,500,000 plus $590,000 pending pay increase)

(House hearings, pt. 1, pp. 91–146)

(P. 4, line 23)

Page 4, line 23, strike out "$66,523,400" and insert in lieu thereof "$67,696,400", an increase of $1,173,000 in the appropriation.

HOUSE REPORT

"A total appropriation request of $70,286,400 was considered. The committee recommends $66,523,400, a reduction of $3,763,000 below the budget request and a decrease of $1,566,600 below the current year figure.

"Of the total budget request, $2,590,000 was contained in House Document No. 370, a supplemental estimate in the form of an amendment to the budget. This has been approved in full and includes funds for the construction of a 230-kilovolt transmission line from McNary Dam to the Walla Walla substation for delivery of power to Pacific Power & Light Co. and other users in the area. The committee was informed by the Department witnesses that the power company

agrees that the line is necessary to provide additional power at the Walla Walla load center to meet rapidly increasing demands in the general area of the Hanford Works.

"Of the amount disallowed, $900,000 was programed for substation and switching facilities at Klamath Falls which would be necessary should construction of the Central Valley intertie with the Bonneville system be approved. Since funds requested by the Bureau of Reclamation for construction of this intertie have been denied so, therefore, is the $900,000 for this item.

"The committee has also disallowed $1,173,000 requested for a 230-kilovolt transmission line between LaGrande and Baker, Oreg. Survey funds for the same line were denied in the 1952 request.

"The remaining $1,690,000 of the reduction is to be absorbed in the conduct of the 1953 program."

JUSTIFICATION

The amendment restores $1,173,000 of the $3,763,000 reduction made by the House in the budget estimate.

This amount is for the construction of a transmission line from LaGrande to Baker, Oreg., to effect an interconnection with the Idaho Power Co., and is contained in item 2 of the following activity schedule:

Activity	Appropriated, 1952 [1]	Budget estimate, 1953	House bill, 1953	Restoration requested
1. Construction in progress	$60,830,000	$43,334,400	$43,334,400	
2. New construction	6,188,000	24,722,000	20,959,000	$1,173,000
3. General plant	1,072,000	2,230,000	2,230,000	
Total	68,090,000	70,286,400	66,523,400	1,173,000

[1] Includes $590,000 pending pay increase.

A breakdown of the restoration request by objects of expenditures follows:

01	Personal services	$75,000
02	Travel	20,000
03	Transportation of things	
04	Communication services	1,000
05	Rents and utility services	1,000
06	Printing and reproduction	
07	Other contractual services	1,000
08	Supplies and materials	645,000
09	Equipment	375,000
10	Lands and structures	55,000
11	Grants, subsidies, and contributions	
	Total	1,173,000

LA GRANDE-BAKER INTERCONNECTION (ITEM I–24), $1,173,000

Construction of 43 miles of 230-kilovolt line between La Grande and Baker, Oreg., plus terminal equipment, will provide necessary and important benefits to the power supply in Washington, Oregon, Idaho, and Utah and will relieve, considerably, transmission-system restrictions between the Spokane area and western Montana. The interconnection between Oregon and the southern Idaho-Utah area which this facility will provide has been strongly endorsed on an engineering basis by the Federal Power Commission, the Bureau of Reclamation, the Defense Electric Power Administration, and the Atomic Energy Commission, as well as by the Bonneville Power Administration. Comprehensive engineering analysis of this tie has proved conclusively the man benefits which will be provided, in addition to demonstrating its economic feasibility.

The Administration did not have an opportunity to refute engineering testimony presented to the House Appropriations Committee by the private utilities of eastern Oregon, southern Idaho, and Utah. Much of this testimony is strongly controverted by the Federal Power Commission network analysis.

At the present time the Idaho Power Co. and the Utah Power & Light Co. are connected to the balance of the Northwest power pool only through the 160-kilovolt company line between Grace, Idaho, and Anaconda, Mont., which is 275 miles long. This interconnection is capable of carrying a maximum of 50,000

kilowatt with an average loading limit of about 45,000 kilowatt. Regularly in the past, the limited capacity of the present interconnection has prevented the full utilization in Montana, northern Idaho, Oregon, and Washington of the surplus power available in southern Idaho and Utah. The converse is also true when, during the high-water season, this transmission bottleneck prevented the utilization of hydroelectric energy for the displacement of steam generation in Utah. During August and September 1951, when an extremely severe power shortage appeared to be imminent in the Pacific Northwest and some interruptible aluminum load on the Bonneville Power Administration system was temporarily dropped, as much as 60,000 to 90,000 average kilowatt was denied the Northwest power pool by reason of the limited capacity of the existing tie circuit.

By the end of 1953 the aggregate installed capacity of the power systems in the southern Idaho-Utah area will approach or exceed 800,000 kilowatts and that of the other systems in the Northwest will be over 7,000,000 kilowatts. The tenuous Grace-Anaconda circuit is much too weak an interconnection, even with its present capacity, to integrate adequately these two large groups of systems and as time progresses becomes of even less value.

Comprehensive engineering studies made on the A-C network analyzer show that as the loads in southern Idaho and Utah grow, other system restrictions will develop on the terminals of the Grace-Anaconda circuit and on the transmission network between Spokane and western Montana which will further restrict the interchange capacity of the Grace-Anaconda circuit. By December 1953 the average loading on this circuit cannot exceed 30,000 kilowatts, although the surplus in southern Idaho and Utah will be some 60,000 average kilowatt higher than this figure. Furthermore, by August 1955, the present circuit will be almost totally useless for transmitting summertime surplus energy from Washington and Oregon into Utah for steam-replacement purposes. The analyzer study shows clearly the need for an additional more direct circuit between the eastern and western groups of the power pool.

A further important factor in connection with the existing tie is the matter of system losses. Power now flowing into or out of southern Idaho and Utah must flow via Grand Coulee and Spokane, across northern Idaho and Montana to Hot Springs and hence to Anaconda and Grace. This is obviously an extremely circuitous route. Furthermore, these flows are superimposed upon certain of these circuits at a time when they are already heavily loaded. Total system losses accompanying the exchange of power over existing ties between the southern Idaho-Utah area and the other load areas in the Northwest are extremely high, amounting to approximately 30 percent of the power interchanged even after the Bonneville Power Administration's 230 kilovolt circuits from Spokane to Hot Springs and Anaconda are completed.

Specific benefits which will be provided by the La Grande-Baker interconnection and which were substantiated by the A-C network analyzer are as follows:

(1) The present capability of the only existing interconnection between the southern Idaho-Utah area and the balance of the Northwest power pool is much too small for integration purposes and as time progresses becomes of even less value. Unless additional unscheduled system facilities are installed by January 1954, the capability of the present Grace-Anaconda interconnection line will decrease from its present value of 45,000 average kilowatts to a value of 30,000 kilowatts.

(2) In the critical period of 1953–54, the southern Idaho-Utah area will have a power surplus of 89,000 average kilowatts. Of this amount, only 29,000 average kilowatts can be transmitted over the existing Grace-Anaconda circuit, leaving 60,000 average kilowatts of surplus power available in southern Idaho and Utah but not transmittable to Washington and Oregon where it is needed. A year later approximately 24,000 average kilowatts of surplus power will similarly be available in southern Idaho and Utah but unusable in Washington and Oregon because of the restricted capacity of the existing interconnection.

(3) With the Baker tie closed, an additional 45,000 average kilowatts of the surplus power in southern Idaho and Utah can be transmitted to Washington and Oregon during the critical period of 1953–54. In 1954–55, all of the surplus in southern Idaho and Utah can be transmitted to Washington and Oregon, representing a gain in the energy supply in those States of 24,000 average kilowatts.

(4) In addition to the above, it is possible to realize as much as a 10,000-kilowatt saving in transmission losses in Washington and Oregon with the Baker tie, depending upon the location of load to be served with the additional surplus power imported through the Baker tie.

(5) The present Grace-Anaconda tie will by August 1955 become almost useless for transmitting summertime surplus hydroenergy in Washington and Oregon

into southern Idaho and Utah for purposes of replacing steam and conserving natural fuels. This condition arises from the fact that the transmission system between eastern Washington and western Montana is fully loaded during the summer months and any power flowing into southern Idaho via Anaconda is superimposed on these heavily loaded facilities.

(6) The Baker tie provides a path whereby surplus hydroenergy can be transmitted to southern Idaho and Utah and at the same time decrease the loading on the critical northern Idaho circuits. The study indicates that 66,000 kilowatts can be delivered into southern Idaho and Utah for steam-replacement purposes and an additional 15,000 kilowatts will flow northward from Grace to Anaconda. The Baker tie will furthermore decrease transmission-system losses in the power pool by some 30,000 to 40,000 kilowatts, when large amounts of power are sent into southern Idaho and Utah.

(7) The Baker interconnection will have an important effect on the power supply in eastern Oregon and western Idaho, since it will provide service to this large area from the west in addition to the present supply from the east. It will also provide substantial improvements in system operation during emergency conditions and will make available the inherent advantages of mutual assistance during system difficulties.

(8) The tie will ultimately serve as a link in the 230-kilovolt connection between the power systems in Oregon and Idaho when increased loads and power resources require the exchange of large blocks of power between these two areas.

A thorough long-range analysis of the La Grande-Baker interconnection by the Federal Power Commission, using data supplied by the utilities in the southern Idaho-Utah area, shows conclusively that the benefit of the tie from steam replacement alone would be substantially greater than the cost of the facilities. All other benefits enumerated above, though in many cases more important than that of steam replacement, would be obtained without cost.

LA GRANDE-BAKER INTERTIE, OREGON

(See also p. 1441)

Senator HAYDEN. You are not asking for any money for the California interconnection?

Mr. RAVER. No, sir.

Senator HAYDEN. Do you have a statement you want to place in the record?

Mr. RAVER. Yes; I will be glad to file this, Mr. Chairman.

The statement refers entirely to the La Grande-Baker intertie. We would like to have it as a matter of record because in the presentation before the House, the private utility companies filed a statement with which we had some differences of opinion and as to which we had no opportunity to make a record in the House.

Senator HAYDEN. Your entire statement will be included in the record, and you may high light it.

Mr. RAVER. If you do not care to have me read it, I will just file it for the record.

Senator CORDON. How long is it, Doctor?

Mr. RAVER. I have a short statement in connection with the intertie, and then I have a detailed engineering statement which I would like to file.

Senator CORDON. I am referring to the statement you feel should go into the record to clear up some erroneous statements or conclusions appearing in the House record.

Is that the engineering statement?

Mr. RAVER. It is based on engineering studies. This is about six pages, typewritten, single-spaced material.

Senator CORDON. I might say that I have discussed this matter with Dr. Raver.

Senator HAYDEN. That being the case, it will go in the record.
Mr. RAVER. I will give this, then, to the reporter.
(The material referred to follows:)

LA GRANDE-BAKER (ITEM I-24)

The La Grande-Baker transmission system interconnection facility was first included in the Bonneville Power Administration's construction program as part of the regular 1952 fiscal year budget. Justification was presented to the House Subcommittee on Interior Department Appropriations at the regular hearings in February 1951. The House committee in its report approved the construction program. The Senate committee disapproved the La Grande-Baker item. To clarify these two conflicting reports, the committee of conference agreed to defer action on the La Grande-Baker line owing to incomplete information indicating its immediate need. The committee suggested that the Department make a further study and resubmit when more complete information was available.

Accordingly, the Bonneville Power Administration proceeded to have further investigations made. As a first step, representations were made to the Defense Electric Power Administration to sponsor a comprehensive engineering study of the possibilities of the interconnection with the participation of all interested utility companies and Federal agencies.

On August 31, 1951, Mr. James F. Fairman, Administrator of the Defense Electric Power Administration, addressed a memorandum to the Assistant Secretary of the Interior advising as follows:

"In reviewing the estimates of load and resources submitted by the Northwest power pool it is evident that the East group may have available this year, and each year thereafter through 1954, a limited amount of surplus energy that could be made available to the West group if additional transmission is available. Defense Electric Power Administration is confident that the proposed interconnection between the two groups by construction of the Baker-La Grande transmission line is needed to efficiently utilize the region's resources. If additional study is needed we would suggest such a study could be efficiently conducted through Federal Power Commission representatives, and if this meets with your approval, we will be pleased to take the matter up with the Federal Power Commission."

The Department's reply of September 13, 1951, concurred with DEPA's conclusion in the obvious benefits from the La Grande-Baker line, but in deference to the conference committee's request for detailed information, suggested that DEPA ask the Federal Power Commission to undertake a thorough investigation of the La Grande-Baker line. To avoid the possibility of misunderstandings, the Department's letter also suggested that this investigation include the participation of all interested utility agencies. For the purpose of the study, the Department offered the Bonneville Power Administration network analyzer and such engineering assistance as would be required. Defense Electric Power Administrator Fairman's letter of October 2, 1951, to the Federal Power Commission then asked for such a study.

Thereupon, the Federal Power Commission requested pertinent data from, and invited participation of, all of the interested private utilities. The companies so invited were the Idaho Power Co., the Utah Power Co. and the California Pacific Utilities Co. While they submitted to FPC substantially all of the requested information, none of the companies, though invited, saw fit to participate in the network analyzer studies except for the meeting on October 10, 1951, at the San Francisco regional office of the FPC, when the procedure for conducting the network analyzer study was discussed. At this meeting there were engineers of the Idaho Power Co. and the Utah Power Co.

Work on the engineering study of the system set up on the network analyzer was started on November 26, 1951, and culminated in a final report just completed (March 1952) of the possible benefits of the La Grande-Baker interconnection.

This report, which has the endorsement of the Federal Power Commission, may be summarized as follows:

1. The present capability of the only existing interconnection between the southern Idaho-Utah area and the balance of the Northwest power pool is much too small for integration purposes and as time progresses becomes of even less value. Unless additional unscheduled system facilities are installed by January 1954, the capability of the present Grace-Anaconda interconnection line will decrease from its present value of 45,000 average kilowatts to a value of about 30,000 kilowatts.

2. In the critical period of 1953–54, the southern Idaho-Utah area will have a power surplus of 89,000 average kilowatts. Of this amount, only 29,000 average kilowatts can be transmitted over the existing Grace-Anaconda circuit, leaving 60,000 average kilowatts of surplus power available in southern Idaho and Utah but not transmittable to Washington and Oregon where it is needed. A year later, approximately 24,000 average kilowatts of surplus power will similarly be available in southern Idaho and Utah but unusable in Washington and Oregon because of the restricted capacity of the existing interconnection.

3. With the Baker tie closed, an additional 45,000 average kilowatts of the surplus power in southern Idaho and Utah can be transmitted to Washington and Oregon during the critical period of 1953–54. In 1954–55, all of the surplus in southern Idaho and Utah can be transmitted to Washington and Oregon, representing a gain in the energy supply in those States of 24,000 average kilowatts.

4. In addition to the above, it is possible to realize as much as a 10,000-kilowatt saving in transmission losses in Washington and Oregon with the Baker tie, depending upon the location of load to be served with the additional surplus power imported through the Baker tie.

5. The present Grace-Anaconda tie will by August 1955 become almost useless for transmitting summertime surplus hydroenergy in Washington and Oregon into southern Idaho and Utah for purposes of replacing steam and conserving natural fuels. This condition arises from the fact that the transmission system between eastern Washington and western Montana is fully loaded during the summer months and any power flowing into southern Idaho via Anaconda is superimposed on these heavily loaded facilities.

6. The Baker tie provides the path whereby surplus hydroenergy can be transmitted to southern Idaho and Utah and at the same time decrease the loading on the critical northern Idaho circuits. The study indicates that the Baker tie is capable of delivering 81,000 kilowatts into the southern Idaho-Utah area. Of this 81,000 kilowatts, 66,000 kilowatts can be delivered for steam replacement purposes and the remaining 15,000 kilowatts will flow northward into the Montana system over the Grace-Anaconda line. The Baker tie will furthermore decrease transmission system losses in the power pool by some 30,000 to 40,000 kilowatts when large amounts of power are sent into southern Idaho and Utah.

7. The Baker interconnection will have an important effect on the power supply in eastern Oregon and western Idaho, since it will provide service to this large area from the West in addition to the present supply from the East. It will also provide substantial improvements in system operation during emergency conditions and will make available the inherent advantages of mutual assistance during system difficulties.

8. The tie will ultimately serve as a link in the 230-kilovolt connection between the power systems in Oregon and Idaho when increased loads and power resources require the exchange of large blocks of power between these two areas.

Other investigations also support the La Grande-Baker interconnection. There is a study covered in the report of the Federal Power Commission dated October 9, 1951, showing conclusively its justification. Among other conclusions, the following is pertinent: "The benefits from steam replacement alone would be substantially greater than the costs and because of the fact that other benefits would be obtained from the interconnection which (although not given a monetary value herein) may exceed those possible from steam replacement, it appears that the interconnection should be made immediately." This FPC study was followed by a shorter-range study covered in the FPC report of October 26, 1951, which makes the following statement among others: "It appears that the major gains that might be obtained during the next few years would be from the stantpoint of national defense and alleviation of shortages."

In recent discussions with the engineers of the Atomic Energy Commission, it was agreed that the La Grande-Baker line would have definite value in providing for the increased power needs of the Hanford area. As a result of these discussions, Gordon Dean, Chairman of the Atomic Energy Commission, in his letter of December 18, 1951, to Mr. Lawton of the Bureau of the Budget, has endorsed the early construction of this interconnection as one of the expedients in relieving the critical power supply situation to the Hanford Works and surrounding area.

Thus, the advantages are overwhelming in favor of the immediate construction of the La Grande-Baker interconnection. Further support for the interconnection can be obtained from the Electric Bond & Share report, dated June 1951, which shows during the winter months critical loadings on the transmission

circuits from Montana to Washington. The La Grande-Baker tie could be justified on the basis of the circuit loadings shown in the report.

Specifically, with respect to the testimony submitted in the House of Representatives hearings on appropriations for the Department of the Interior by Elmer E. Kime, California-Pacific Utilities Co.; R. E. Gale, Idaho Power Co.; E. M. Naughton, Utah Power Co., and T. L. Doran, Montana Power Co., the following comments are pertinent:

1. First of all, it is to be deplored that Congress must now act on an issue that is confused by conflicting engineering testimony that should have been resolved by the interested parties in the Northwest. It is the belief of the Bonneville Power Administration that the utility companies are wholly to blame for this situation. As the record will show, the Administration has made every endeavor, but without success, to have the companies' engineers deal directly with Bonneville Power Administration engineers and settle on a straight factual basis the major points of issue. Glaring proof that the companies had no intention of resolving this matter on a cooperative basis is evidenced from the fact that they declined to participate, although expressly invited, in the conduct of the analyzer study just completed. The statement, therefore, of Mr. Gale that BPA had failed to contact any of the interested companies is not only false but gives a distorted picture as to who has endeavored to cooperate and who has failed to do so. In this connection, it is interesting to note that all agencies that participated in the study fully endorsed the tie. These include the Bonneville Power Administration, the Federal Power Commission, and the Bureau of Reclamation. Contrary to Mr. Gale's statement, the Defense Electric Power Administration has recommended this interconnection, as evidenced by the hereinbefore quoted paragraph of Mr. Fairman's letter of August 31, 1951.

2. Mr. Gale's testimony includes a tabulation which shows the total surplus power available by months in Idaho and Utah, the amount of this surplus that could be transmitted over the Idaho-Montana tie and the remaining amount that would be available for delivery over the proposed tie. Mr. Gale's reasoning is definitely in error. The tabulation substantially overstates the capacity of the Idaho-Montana tie. Instead of 60,000 kilowatts of average power that he indicates can be delivered over this interconnection, our studies show that unless some major investments are made to increase its capacity this tie in 1954 will carry only approximately 30,000 kilowatts. Even today, when system limitations are restrictive, the tie is capable of carrying an average of 50,000 kilowatts, as borne out by the reports of the Northwest power pool, of which Mr. Gale's company is a participating member.

In explanation of this tabulation, Mr. Gale endeavors to reason that the major portion of this surplus energy, after deducting Montana deliveries, will not be usable by Bonneville because, as he states the case: "It will be available only during light-load periods (including week ends) and, further, because operating restrictions, such as Grand Coulee tailwater conditions and transmission-line limitations, will prevent full utilization." An analysis of load-duration curves for both the Utah-Idaho systems and for the western group of the Northwest power pool proves that Mr. Gale's statement is erroneous. This analysis of load and resources for January 1954, under median conditions, shows that all surplus energy in the Idaho-Utah area will be needed and can be used to carry the loads of the Western Group Utilities. The Administration's analysis, taking into account all limitations, including those expressed by Mr. Gale and using the load and resource data submitted by the companies themselves, shows that this tie would make possible an increase of 55,000 kilowatts of average power during the critical winter months of 1953–54 in Washington and Oregon without impairing the power supply in Utah and Idaho. This figure takes into account the savings in losses made possible by the tie. The Federal Power Commission's independent studies bear out BPA's conclusions and not the companies.

3. Mr. Gale is in error in stating the Administration has no surplus power to dispose of. Certainly he must know that during the late spring and summer months, that is from April through September, when stream flows are at a high level on the Columbia River and its tributaries, and with the low seasonal loads during this period, there have been and will continue to be considerable amounts of hydroelectric power in excess of all foreseeable needs even during a low-water year. Obviously a considerable portion of this power which otherwise would be wasted as spilled water without the tie, could be delivered to the Idaho-Utah system to displace steam-generated energy. The present Idaho-Montana tie is now used to the limit of transmission capacity for this purpose. The benefits to be derived through the more effective use of hydroelectric energy alone would pay all appropriate costs thereof.

4. All of the private utility representatives stress a point that is not contraverted by the Administration's justification for the La Grande-Baker interconnection. They emphasize that since the Huntington-Baker 138 kilovolt transmission line (now operated at 69 kv.) has been energized there is ample capacity to take care of the needs of Baker, Oreg. BPA has not claimed otherwise, except to indicate that an incidental and important benefit from the La Grande-Baker line would be to insure against emergencies to the eastern Oregon and western Idaho areas. Wholly apart from the power-supply situation in the Baker area itself, the regional benefits from the proposed interconnection are overwhelmingly justified.

5. Mr. Gale questions BPA's claims to the savings in losses by reason of the La Grande-Baker interconnection. He endeavors to point out that these losses cannot be substantiated by any analysis of the network-analyzer studies. The network-analyzer study shows the flow of power over this interconnection will be at least 50 percent greater than over the weak Idaho-Montana tie. The reason for this is that the surplus power in the Idaho-Utah area must be delivered by displacement or otherwise to the Willamette Valley area where the power shortage usually exists. A glance at the map would show that the transmission distance from Idaho to the Portland-Willamette Valley area is much shorter over the Baker-La Grande than over the Idaho-Montana interconnection.

6. Mr. Gale decries the building of the Baker-La Grande line as a waste of critical materials. The manifest benefits which have been already pointed out would show that the completion of this line would represent one of the best and wisest uses of critical materials. Certainly the Defense Electric Power Administration letter of August 31, 1951, as quoted hereinbefore, should dispell his doubts on this point.

7. Mr. Gale advises that the company would be required to spend $900,000 in addition to the funds requested by the Administration to make the La Grande-Baker tie effective. While this amount of money seems high compared to the Federal Power Commission's estimate of $380,000, it is insignificant in terms of the benefits to be gained by the tie. Moreover, it is evident from the network-analyzer study that the company would have to provide these facilities or their equivalent to meet load growth for the local area power supply within the next few years whether or not the La Grande-Baker tie is built.

TRANSMISSION LINE TO HANFORD ATOMIC ENERGY PLANT

Mr. RAVER. I might just discuss with you the La Grande-Baker intertie for a moment.

Our concern about it primarily goes to the question of adequate service to the Hanford Engineering Works of the Atomic Energy Commission.

Senator HAYDEN. And the atomic-energy development there?

Mr. RAVER. Yes, sir.

We feel that this intertie will provide at least an interim answer to a very serious service problem that we have there and will continue to render an improvement in our service to the rest of the Northwest after some solution in the way of additional generating facilities is worked out for the Atomic Energy Commission.

Now, we have prepared a so-called package arrangement for the Atomic Energy Commission. We prepared it after a considerable period of consultation with them and their engineers at Hanford.

That package consisted of an interim arrangement which included the construction of the 230 kilovolt tie-line from La Grande to Baker, Oreg., to tie in with the facilities of the Idaho Power Co. at that point as one part of the package.

ACTION ON 1952 APPROPRIATION

Incidentally, we had that tie line in our appropriation request last year. It was approved by the House last year but was disallowed

by the Senate and in conference on the basis that we needed to present additional information about the tie line.

We secured that information, which was engineering information, from the companies involved at the request of the Defense Electric Power Administration and the Federal Power Commission. That information was turned over to us and to them for a very detailed engineering study.

ENGINEERING STUDY MADE

A calculating board study was made which supports the need for that tie line and supports the feasibility of the tie-line for the purposes we have in mind which are an interim power supply for Hanford.

That was one part of the package. The second part——

Senator CORDON. May I interrupt you there before you leave that particular portion of the package?

Will you place in the record the engineering data which you have discussed here, and which, as you say, supports the necessity for the Baker intertie?

Mr. RAVER. Yes, sir; we will place that in the record.

(The information referred to appears on pp. 93 to 99.)

Senator CORDON. Can you cover it, in at least a summary fashion, orally?

Mr. RAVER. Yes, sir. It is in this prepared statement that I have given the reporter.

Senator CORDON. Will you just summarize it, please.

SUMMARY OF ENGINEERING REPORT

Mr. RAVER. A summary of the engineering report which has the endorsement of Federal Power Commission is as follows:

The capability of the only existing interconnection between the southern Idaho-Utah area and the balance of the Northwest power pool—that is by way of Utah to Anaconda, Mont., called Grace-Anaconda line—is much too small for integration purposes, and as time progresses becomes of even less value.

Power is brought into the Northwest pool at the present time by an interconnection with Utah by way of Anaconda, Mont. It ties in there with facilities from Anaconda, Mont., across to the Washington Water Power Co.

Unless additional unscheduled facilities are installed by January 1954, the capability of the present Grace-Anaconda interconnection line will decrease from its present value of 45,000 average kilowatts to a value of about 30,000 kilowatts.

In the critical period of 1953–54, the southern Idaho-Utah area will have a power surplus of 89,000 average kilowatts. Of this amount only 29,000 average kilowatts can be transmitted over the existing Grace-Anaconda circuit, leaving 60,000 average kilowatts of surplus power available in southern Idaho and Utah, but not transmittable to Washington and Oregon where it is needed.

A year later approximately 24,000 average kilowatts of surplus power will similarly be available in southern Idaho and Utah, but unusable in Washington and Oregon because of the restricted capacity of the existing interconnection.

Senator CORDON. I did not get the last statement. Will you repeat it, please?

Mr. RAVER. The last figure was 60,000 average kilowatts of surplus power.

Senator CORDON. Yes.

Mr. RAVER. Which could not be transmitted in the critical period of 1953–54.

SURPLUS POWER AVAILABLE IN IDAHO AND UTAH

During the year after that, which would be 1954–55, there would still be approximately 24,000 kilowatts of surplus power available in southern Idaho and Utah, but unusable in Washington and Oregon because of the restricted capacity of the existing interconnection.

Senator YOUNG. Where does that surplus power come from?

Mr. RAVER. From steam plants in Utah, primarily.

Senator YOUNG. Steam plants of the private power companies?

Mr. RAVER. Yes.

Senator YOUNG. Private power companies that have facilities larger than are presently needed?

Mr. RAVER. I presume that is it. Mr. Schultz, the chief engineer, will answer.

Mr. SCHULTZ. That will be in the nature of steam power available during the early morning hours, Saturdays and Sundays when they will not be using their total steam power, and we can use on our system by displacing hydropower which can be stored.

Mr. RAVER. We can use it for storage.

Mr. SCHULTZ. We will just hold back water during that period and will use that steam power which will make the hydropower available at other times on our system.

ADDITIONAL POWER THROUGH INTERTIE TO NORTHWEST

Mr. RAVER. Then the third point is that with the Baker tie closed, an additional 45,000 average kilowatts of the surplus power in southern Idaho and Utah can be transmitted to Washington and Oregon during the critical period of 1953–54. In 1954–55 all of the surplus in southern Idaho and Utah can be transmitted to Washington and Oregon, representing a gain in the energy supply in those States of 24,000 average kilowatts.

Now, in addition to that, this tie would provide a shorter route for bringing the power into Oregon and Washington than the route now utilized, namely, from Utah to Anaconda, Mont.

As a result of that shorter route we would save about 10 000 kilowatts of transmission losses.

Senator HAYDEN. What is the difference in mileage?

Mr. RAVER. That will be in addition.

Senator CORDON. You do not bring that power in any way. You turn it into the line there, and that is just that much more than you do not have to shoot over to the east. You do not actually deliver kilowatts at Anaconda and take them out, for instance, at Spokane.

Mr. RAVER. No. There is a displacement process there.

Senator CORDON. So there is no actual transmission for any vast distance involved in this.

Mr. RAVER. At certain times of the year, there are.

Mr. SCHULTZ. May I please explain that flow on the map?

MONTANA INTERCONNECTION

At the present time, and not shown on the map, there is an interconnection between the Montana Power & Light Co. system and the Utah Power & Light Co. system that goes from Anaconda, Mont., down into the Utah area.

Now, the surplus power available in Utah and Idaho must flow over that interconnection. That distance is approximately 275 miles.

That power is delivered into Montana and adds to the surplus that is already in Montana for the simple reason that Montana, during the critical period, is pushing its power into Washington and Oregon.

Now, the real shortage of power is down in the Portland and Clackamas County area. So the power surplus we have available in Utah, in effect, flows from Utah and Idaho to Montana, thence over to Washington, and with some minor exceptions from there all the way down to Oregon.

It does get rather tired by the time it gets down into Oregon.

Senator CORDON. It would if it got there, but it does not.

Mr. SCHULTZ. Well, in effect that is what happens on the system, sir.

Senator CORDON. Sure, you might put a quart of water into the pipeline at Anaconda and then take out a quart at my home in Roseburg, but it would not be the same quart that you put in.

Mr. SCHULTZ. In effect, that quart has to flow, if we can deal in quarts, all of the way.

Senator CORDON. And the line has to be full.

INTERTIE TO SHORTEN TRANSMISSION DISTANCE

Mr. SCHULTZ. As contrasted with that, if we were to build a short line from La Grande to Baker, and that system were connected at Baker, the transmission distance, as you can see, would be much shorter this way than it would be over the other way. That is the way it is proposed by the interconnection at La Grande-Baker.

You have that not only on my authority, but we put that on our system calculating board. The way the power flows, it just wants to to go by way of La Grande-Baker and it will flow that way.

As a matter of fact, it will flow only to Pendleton. That is where it drops off, which is really a short haul. That is the reason we consider it a much shorter haul. We therefore save on losses by reason of the shorter haul resulting from that interconnection.

Senator HAYDEN. Go ahead, Dr. Raver.

CAPACITY OF GRACE-ANACONDA INTERTIE

Mr. RAVER. The present Grace-Anaconda tie by August 1955, except for the addition of new facilities, will become practically useless for transmitting summertime surplus hydro energy in Washington and Oregon into southern Idaho and Utah for purposes of replacing steam and conserving natural fuels.

In other words, this thing will work both ways. Our primary interest as a part of this package is to help us during an interim period to take care of the atomic energy situation at Hanford, but there is

the possibility of utilizing our summer surpluses down there to displace steam in Utah as well.

Senator CORDON. That will be privately generated steam in those places?

Mr. RAVER. That is right.

CONTRACT NEGOTIATIONS WITH PRIVATE POWER COMPANIES

Mr. CORDON. Have you any contracts?

Mr. RAVER. No, sir; we have no contracts.

Senator CORDEN. Have you discussed it with them?

Mr. RAVER. We have not discussed it with the Idaho power people because we have not been able to get into discussions.

Senator CORDON. If they do not want your power, how are you going to force them to take it?

Mr. RAVER. We cannot force them to take it. We assume that if they can get something cheaper than what they are now buying, they will take it.

Senator CORDON. Yet when you offered them that they did not even answer?

Mr. RAVER. We have not had an answer.

Senator CORDON. You are asking for a considerable amount of money out of the Federal Treasury to bring something to an unwilling recipient.

Mr. SCHULTZ. May I add a word again, Senator?

NORTHWEST POWER POOL

We do have an arrangement now. We have the Northwest power pool in operation in the Northwest, and we do have that present connection between Idaho and Montana in service. That connection is used to its fullest extent when we have surplus power available in the summertime.

When the hydro is running full in the summertime, we have a surplus in the western section of this area. We push that to Montana, and we push it to Idaho to the full capacity of those ties.

However, those ties are presently overloaded.

It would stand to reason that if we were to increase the capacity of the ties, we would not be changing any arrangement, but would merely be increasing the amount of power that will go down into Utah and Idaho.

We already push power to Utah and Idaho without any contract, so we are merely increasing the amount of power that will go down that way.

Senator CORDON. Is the Utah Power & Light Co. a member of the Northwest power pool?

Mr. SCHULTZ. That is correct, sir.

Senator CORDON. If it is, that is news to me.

Mr. RAVER. They are a member of the Northwest power pool; they are not a member of the western part of the power pool.

Senator CORDON. Now we have a new one. I thought we had only one power pool. Do we have two? If so, what are they?

Mr. RAVER. There is one pool, the Northwest power pool. But the western utilities in that pool operate their facilities and the eastern

section has a pool and operates its facilities. There is an interchange between the two pools that has been agreed to between the pool members.

Senator CORDON. I would like to have you place in the record the names of the members of both pools.

Mr. RAVER. I will be glad to do that, Senator.

Senator CORDON. I would like to see just what we have.

Mr. SCHULTZ. Again I do not wish to interrupt.

Senator CORDON. You go right ahead. You are the engineer.

Mr. SCHULTZ. All right, sir.

There is one pool, the Northwest Power Pool, but for convenience of operation the Western group handles their problems, their day-to-day problems separately from those utilities in the Eastern group.

Senator CORDON. Will you put the names into the list, then, on a day-to-day operational basis?

Mr. SCHULTZ. All right, sir.

They do pool their activities very carefully, and all of them, the private and the public agencies, work out there to get very kilowatt of power that they can out of their pool.

(The information referred to follows:)

MEMBERS OF THE NORTHWEST POWER POOL

EASTERN GROUP

Montana Power Co.
Idaho Power Co.
Utah Power & Light Co.

WESTERN GROUP

Puget Sound Power & Light Co.
Seattle City Light
Tacoma City Light
Washington Water Power Co.
Pacific Power & Light Co.
Portland General Electric Co.
British Columbia Electric Railway, Ltd.
Bonneville Power Administration

Senator CORDON. As I understand it, or, at least, the deduction I would make from what you have said, is that you do not need any contract at all, either with the Idaho Power Co. or the Utah Power & Light Co. in order to get full value out of the interchange of power—and when I say interchange, I mean flowing both ways as an exchange as a result of building the proposed La Grande-Baker line.

Mr. SCHULTZ. You are asking an engineer to answer a legal question, but I will say that——

Senator CORDON. I want somebody to answer it.

Mr. SCHULTZ. I will answer it this way, sir; that I do know they are operating that way now, and I assume that if a contract were needed they would quickly get one, or else the dispatchers would see some way of getting that power where it could be best used within the framework of existing pool arrangements.

Mr. RAVER. I would prefer to have a contract with them.

Senator CORDON. What good is it?

Mr. RAVER. If they tie in to our own facilities, we should have an interchange understanding with them. We have that with everyone else we do business with.

OPPOSITION OF PRIVATE POWER TO INTERTIE

Senator CORDON. Let us take the next one. I note that the private power companies are not in agreement with you with respect to the Baker line, what you term the intertie. If it would aid them by giving them cheaper power when they need that, or by helping them get rid of surplus power at less cost when they have that, why should anybody oppose such a thing?

There is opposition. Why is there? If there are any dead cats here, let us drag them out.

Mr. RAVER. I think you should ask the president of the Idaho Power Co. about that. We have tried to open negotiations with them, and they have refused to talk to us.

Senator CORDON. The first reaction I have to that statement is that, having been unable to get them to voluntarily work with you, you want to put the line in so that they will be forced to.

Mr. RAVER. No; I do not agree with that statement. I have an obligation to perform to one of the important customers of the national defense set-up, and that obligation has been continuous ever since they have been there. They are not satisfied with the way we are fulfilling our obligation.

I have taken the problem up to the top level of national defense. The Defense Electric Power Administration supports our position on the need for this line, as does the Atomic Energy Commission and the Federal Power Commission. I am merely fulfilling my duty as an administrator in presenting the facts to you.

Senator CORDON. If you are referring now to the Atomic Energy Commission's plant, I would like to have the record show that. If they are dissatisfied, it is news to me.

At various times when it would have been to their interest to advise me and through me this committee of what their needs were and how they might be supplied, they have indicated almost absolute dissent.

And, as you know, Dr. Raver, you aided in one of those operations when they also took the same position.

Mr. RAVER. We have a letter from the manager of the Atomic Energy Commission which I would like to place in the record, if I may, at this point.

Senator CORDON. Might that go into the record, Mr. Chairman? I would like particularly to have that letter appear in the record.

Senator HAYDEN. The letter will be included in the record at this point.

(The material referred to follows:)

UNITED STATES ATOMIC ENERGY COMMISSION,
HANFORD OPERATIONS OFFICE,
Richland, Wash., April 3, 1952.

Subject: Electric service to Hanford Works, United States Atomic Energy Commission.

BONNEVILLE POWER ADMINISTRATION,
P. O. Box 3537, Portland, Oreg.

(Attention: Dr. Paul J. Raver, Administrator.)

GENTLEMEN: We call your attention to the fact that the critical power condition which resulted from the loss of several generators at Grand Coulee Dam on Friday, March 14, necessitated the complete shut-down of all Hanford pro-

duction units. Fortunately, it was possible to restore stabilized power conditions on the BPA system in sufficient time to resume operations in approximately 40 minutes. However, if the duration of the critical power condition had extended an additional few minutes, production in these plants could not have been resumed for a considerable period of time. Such an outage would represent a substantial loss in production, inasmuch as equilibrium operating conditions cannot be attained for some time following an extended shut-down.

In the interest of national security, we wish to reemphasize the extreme importance attached to the quality and reliability of electric service supplied to the Hanford Works of the Atomic Energy Commission. Because of the vital role which this project plays in the atomic weapons program, continuity of electric service is absolutely essentially to the continuity of operations.

With this in mind, we are extremely interested to what extent any of the projects that BPA has pending for appropriation, particularly the generation and distribution facilities of the Ice Harbor Dam, would have prevented a critical power condition and associated production interruption such as that experienced at Hanford on March 14.

Very truly yours,

DAVID F. SHAW, *Manager.*

DECEMBER 18, 1951.

FREDERICK J. LAWTON,
Director, Bureau of the Budget,
Washington, D. C.

DEAR MR. LAWTON: We have recently discussed with Mr. D. L. Marlett, Assistant Administrator of the Bonneville Power Administration, the steps that Administration proposes to take to strengthen their power network in the Pacific Northwest. We understand that the Bureau of the Budget approval is being sought on several of these steps and Mr. R. D. Searles, Acting Secretary of the Interior, has asked that we advise you of the effect the proposed steps would hav on our Hanford, Wash., operation.

The proposed steps or projects discussed by the Bonneville Power Administration are:

(*a*) Install Idaho tie line from Baker, Oreg., to La Grande, Oreg.

(*b*) Install California tie line from Klamath Falls, Oreg., to Shasta Dam.

(*c*) Initiate construction of the Ice Harbor Dam.

Because of the extensive growth of large power consuming industries in the Pacific Northwest we have been concerned for the past 2 years over Bonneville's ability to continue to deliver to our Hanford plant firm, uninterrupted power. As you know, a highly reliable source of power, free of interruption and voltage fluctuations, is essential to our production reactors.

We have received assurances from Bonneville Power Administration that to the greatest extent possible they will afford Hanford preferential treatment in this regard. However, with a system as overloaded as the Bonneville Power Administration system even preferential treatment does not afford adequate insurance against power outages.

We understand that all three of the steps enumerated herein will strengthen the Bonneville Power Administration system.

* * * (Deletion for security reasons.)

With respect to the Ice Harbor Dam, we have previously indicated to Bonneville Power Administration that in our opinion the best way to protect the Hanford project from interruption of production through electric service is to provide the project with a source of generation which could be separated by automatic relays and switch from the rest of the Bonneville power system. We further stated that it appeared to us that this could best be achieved by a separate connection (not through the Midway substation) with a nearby source of generation, such as any one of the dams on the lower Snake River. We would not presume, however, to recommend which of several possible projects within a short radius of the Hanford Works would be most dependable. The Ice Harbor Dam, with a separate transmission line to the Hanford project, would provide added assurance of firm uninterrupted power for our present production operations, and in the event of further expansion at Hanford, this source would provide the necessary power required.

Yours very truly,

UNITED STATES ATOMIC ENERGY COMMISSION,
GORDON DEAN, *Chairman.*

ATOMIC ENERGY COMMISSION,
HANFORD OPERATIONS OFFICE,
Richland, Wash., August 29, 1950.

Subject: Electric service to Hanford works, United States Atomic Energy Commission.

DR. PAUL J. RAVER,
Administrator, Bonneville Power Administration,
Portland, Oreg.

DEAR DR. RAVER: Special provision for the quality of electric service furnished to this project was originally provided in an order of the War Production Board dated November 1, 1944. The extreme importance of the quality of the electric service furnished to the Hanford works of the Atomic Energy Commission has been reemphasized particularly by the following correspondence:

Letter from Acting Chairman Pike to Secretary Krug of October 30, 1947, and the reply to Mr. Pike from Acting Secretary Chapman dated November 5, 1947.

Letter of February 9, 1948, from Carleton Shugg, manager, Hanford operations office, to Dr. Raver, and the reply thereto from Mr. Marlett to Mr. Shugg dated February 20, 1948.

Letter of April 16, 1948, from Mr. Shugg to Dr. Raver and reply of April 28, 1948, from Mr. Marlett to Mr. Shugg.

Letter of August 25, 1948, Mr. Shaw to Dr. Raver, and reply of November 19, 1948, from Mr. Schultz to Mr. Shaw.

Because of the larger number of plants which are now in operation at the Hanford works and because of the increasing importance of the production commitments for which the Hanford works is responsible in meeting the requirements of the atomic weapons program, the quality of electric service for the Hanford works is of greater importance today than ever before. From the standpoint of national security, continuity of operations at this project demands that every reasonable step be taken to insure the continuity and quality of electric service.

On June 6, 1950, the most serious electric power outage experienced to date by the Hanford works occurred from a general system breakdown of the entire Bonneville system. In reviewing with your engineers the circumstances which could bring about this kind of occurrence, we have become convinced that the best way to protect the Hanford project from interruption of production by this kind of electric service failure is to provide the project with a source of generation which could be separated by automatic relays and switches from the rest of the Bonneville power system at times of system failure. It appears to us that this could best be achieved by a special connection (not through the Midway substation) with a nearby source of generation, such as any one of the dams on the lower Snake River, which we understand to be under consideration. We would not presume to recommend specifically as to which would be most desirable of the several projects which we understand to be pending within a sufficiently short radius of the Hanford works.

You will recall that in our letter to you of April 16, 1948, we requested that you consider supplying this project with 230-kilovolt power from sources and through transmission systems independent of Midway. In view of the experience obtained since that time, we would like to make a firm recommendation that such a separate source and transmission system be provided, and we urge that it be provided as speedily as possible.

Very truly yours,

DAVID F. SHAW, *Manager.*

STEAM PLANT AT HANFORD ATOMIC ENERGY PLANT

Mr. RAVER. Obviously, Senator, the Atomic Energy Commission is looking to us to take care of their needs. I assume that they are expecting me to speak for them on the question of what those needs are, and I think it is our responsibility to fulfill them.

I have indicated to the Civil Functions Appropriations Subcommittee of the House in connection with Ice Harbor Dam, which was another part of this defense package to take care of the needs of the Hanford project, that, so far as I am concerned, the responsibility

which I have in this matter is laid in the lap of Congress for some solution.

If I reach a point where I cannot fulfill my responsibility, unless certain things are done then I ought to say so. That is about the situation.

Senator CORDON. I do not go along with those administrators who say that it has to be this or else.

Mr. RAVER. I am sorry but I did not intend to convey that impression. This is a package which I am proposing. The Atomic Energy Commission has placed a problem before BPA and we are endeavoring to offer the best solution.

Now, if there is some other way of doing it, I would be glad to know about it and consider it. We have not found one as yet.

Senator CORDON. Have you looked?

Mr. RAVER. One alternative that has been considered is for the Government, the Atomic Energy Commission, to build a steam generating plant at Hanford. That would do it.

Senator CORDON. Have you gotten any information on that?

Mr. RAVER. Do you mean as to whether they are going to build it, or not?

Senator CORDON. What the power would cost and whether there would be a saving. You estimate that the La Grande-Baker intertie is going to cost so much. There is another intertie in California, which you are urging now, which is going to cost so many millions of dollars, and you are going to have to put in special lines in addition into the area. Those are going to cost so much money.

That total capital investment might in the end represent such a terrific added cost to get the present power, but might be justified in putting in the system. I do not know. I would like to know whether you know.

Has anyone in your engineering group made any rough calculations in that field, Dr. Raver?

Mr. RAVER. We have studied the steam plants, but not specifically for Hanford. We have been studying the possibilities of steam plants in the Northwest now for 2 years. Our engineers have gathered considerable economic data on that subject.

Senator CORDON. If you could furnish the committee with information as to what the cost would be for steam at Hanford, along with any alternative proposals for service to Hanford, I hope you will do so.

(The information referred to appears on pp. 1618–1619.)

Senator CORDON. Incidentally, of course, we are going to have the same figures for steam for Paducah and a few other places, so we will have a chance to get some kind of a check on that.

Now, I have one other thing, please.

DEFENSE CONSIDERATIONS

With respect to the La Grande-Baker intertie you gave in your summary certain figures as to surplus power that would be available from the Utah Power & Light Co. and the Idaho Power Co. at various times and for various periods.

I would like to have a statement indicative, first, of when you would expect the intertie into your line; second, the amounts of

surplus power that are estimated—and I understand that those will have to be estimates because they are in the future—that will be available thereafter for such period as the interested groups, including the Defense Electric Power Administration and the Federal Power Commission and the Bonneville Power Administration, have deemed the possible emergency to exist or a possible need to exist for the use of surplus power from this source.

Mr. RAVER. We will be glad to provide that, if we may, for the record.

(The information referred to follows:)

ENGINEERING DATA ON LA GRANDE-BAKER INTERCONNECTION

(See also p. 84)

The scheduled energization date for the intertie is December 1953.

The surplus energy that is estimated to be available in southern Idaho and Utah is listed by months and years in table I of the following engineering study:

MEMORANDUM

MARCH 6, 1952.

To: S. E. Schultz.
From: Branch of System Engineering.

A-C ANALYZER STUDY L-102, OREGON-IDAHO INTERCONNECTION AT BAKER, OREG.

Transmitted herewith is a report covering the results of our recent a-c network analyzer study of the proposed Oregon-Idaho interconnection at Baker, Oreg. This study was made in cooperation with the San Francisco office of the Federal Power Commission and with the assistance of the Boise and Denver offices of the USBR. The Idaho Power Co. and the Utah Power & Light Co. also cooperated to the extent that they furnished most of the load, resource and system data on their respective systems through and at the request of the FPC.

The study clearly indicates the immediate need for additional interconnection capacity between the power systems in the southern Idaho-Utah area and the balance of the Northwest power pool for the purpose of transmitting power surpluses from southern Idaho and Utah to Washington and Oregon as well as for utilizing temporary hydro power surpluses to displace steam generation in Utah. The proposed BPA-Idaho Power Co. tie at Baker is the only satisfactory long range means for fulfilling this need. This interconnection is a necessary and important system addition and will provide substantial benefits to both the eastern and western groups of the Northwest power pool.

The major specific engineering conclusions of this analyzer study are summarized below and are discussed in greater detail in the report proper.

1. The present capability of the only existing interconnection between the southern Idaho-Utah area and the balance of the Northwest power pool is much too small for integration purposes and as time progresses becomes of even less value. Unless additional unscheduled system facilities are installed by January 1954, the capability of the present Grace-Anaconda interconnection line will decrease from its present value of 45,000 average kilowatts to a value of 30,000 kilowatts.

2. In the critical period of 1953–54, the southern Idaho-Utah area will have a power surplus of 89,000 average kilowatts. Of this amount, only 29,000 average kilowatts can be transmitted over the existing Grace-Anaconda circuit, leaving 60,000 average kilowatts of surplus power available in southern Idaho and Utah but not transmittible to Washington and Oregon where it is needed. A year later, approximately 24,000 average kilowatts of surplus power will similarly be available in southern Idaho and Utah but unusable in Washington and Oregon because of the restricted capacity of the existing interconnection.

3. With the Baker tie closed, an additional 45,000 average kilowatts of the surplus power in southern Idaho and Utah can be transmitted to Washington and Oregon during the critical period of 1953–54. In 1954–55, all of the surplus in southern Idaho and Utah can be transmitted to Washington and Oregon, representing a gain in the energy supply in those States of 24,000 average kilowatts.

4. In addition to the above, it is possible to realize as much as a 10,000-kilowatt saving in transmission losses in Washington and Oregon with the Baker tie, depending upon the location of new load to be served with the additional surplus power imported through the Baker tie.

5. The present Grace-Anaconda tie will by August 1955 become almost useless for transmitting summertime surplus hydro energy in Washington and Oregon into southern Idaho and Utah for purposes of replacing steam and conserving natural fuels. This condition arises from the fact that the transmission system between eastern Washington and western Montana is fully loaded during the summer months and any power flowing into southern Idaho via Anaconda is superimposed on these heavily loaded facilities.

6. The Baker tie provides a path whereby surplus hydro energy can be transmitted to southern Idaho and Utah and at the same time decrease the loading on the critical northern Idaho circuits. The study indicates that 66,000 kilowatts can be delivered into southern Idaho and Utah for steam-replacement purposes and an additional 15,000 kilowatts will flow northward from Grace to Anaconda. The Baker tie will furthermore decrease transmission system losses in the power pool by some 30,000 to 40,000 kilowatts, when large amounts of power are sent into southern Idaho and Utah.

Other engineering conclusions are given beginning on page 6 of the main body of the report proper followed by a detailed discussion of each of the 11 load flow studies prepared.

7. The Baker interconnection will have an important effect on the power supply in eastern Oregon and western Idaho, since it will provide service to this large area from the west in addition to the present supply from the east. It will also provide substantial improvements in system operation during emergency conditions and will make available the inherent advantages of mutual assistance during system difficulties.

8. The tie will ultimately serve as a link in the 230-kilovolt connection between the power systems in Oregon and Idaho when increased loads and power resources require the exchange of large blocks of power between these two areas.

F. A. RIEBE,
Assistant Chief, Branch of System Engineering.

A–C ANALYZER STUDY L–102, OREGON-IDAHO INTERCONNECTION AT BAKER, OREG.

This report sets forth the major conclusions resulting from a comprehensive A–C network analyzer study made for the purpose of determining the engineering advantages which can be obtained from effecting an interconnection between the BPA and Idaho Power Co. systems at Baker, Oreg. This study was made in cooperation with the San Francisco office of the Federal Power Commission and with the assistance of the Boise and Denver offices of the USBR. The Idaho Power Co. and Utah Power & Light Co. also cooperated to the extent that they furnished most of the load, resource and system data on their respective systems through and at the request of the FPC. These latter companies as well as the California-Pacific Utilities Co. were invited to actively participate in this study but representatives from these companies were not present when the analyzer work was performed. All data pertaining to the operations of the Montana Power Co. and Washington Water Power Co. were taken from an analyzer study prepared by the Ebasco Services Inc. for these companies in June 1951.

At the present time, neither the I. P. Co. nor the U. P. & L. Co. has a direct interconnection to the BPA. These two systems are mutually interconnected in the southeastern corner of Idaho through one 138-kilovolt and two 44-kilovolt circuits. The only existing tie between these two utilities and the remaining portion of the Northwest Power Pool is over the very long 160-kilovolt line between Grace, Idaho and Anaconda, Mont. This circuit is jointly owned by the I. P. Co., U. P. & L. Co. and Montana Power Co. and is almost 275 miles long. Because of its length and relatively low voltage level and because of the large size of the power systems it ties together, the present interconnection is capable of carrying a maximum of only 50,000 kilowatts with an average loading limit of about 45,000 kilowatts. As will be explained later this study shows that, as the loads in Montana, southern Idaho and Utah grow other system restrictions will develop around the two terminals of the Grace-Anaconda line and on the transmission network between Spokane and western Montana which will further seriously limit the interchange capacity over the Grace-Anaconda circuit.

By the end of 1953, the aggregate installed capacity of the power systems in

the southern Idaho-Utah area will approach or exceed 800,000 kilowatts and that of the other systems in the Northwest will be over 7,000,000 kilowatts. The tenuous Grace-Anaconda circuit is much too weak a tie, even with its present capacity, to integrate adequately these two large groups of systems and as time progresses becomes of even less value. Regularly in the past, the limited capacity of the present interconnection has prevented the full utilization in Montana, northern Idaho, Oregon and Washington of the surplus power available in southern Idaho and Utah. The converse is also true when, during the high water season, this transmission bottleneck prevented the utilization of hydroelectric energy for the displacement of steam generation in Utah. During August and September 1951, when an extremely severe power shortage appeared to be imminent in the Pacific Northwest and some interruptible aluminum load on the BPA system was temporarily dropped, as much as 60,000 to 90,000 average kilowatts was denied the Northwest Power Pool by reason of the limited capacity of the existing tie circuit.

A further important factor in connection with the existing tie is the matter of system losses. Power now flowing into or out of southern Idaho and Utah must flow via Grand Coulee and Spokane, across northern Idaho and Montana to Hot Springs and hence to Anaconda and Grace. This is obviously an extremely circuitious route. Furthermore, these flows are superimposed upon certain of these circuits at a time when they are already heavily loaded. Total system losses accompanying the exchange of power over existing ties between the southern Idaho-Utah area and the other load areas in the Northwest are extremely high, amounting to approximately 30 percent of the power interchanged even after the BPA 230-kilovolt circuits from Spokane to Hot Springs and Anaconda are completed.

In order to interconnect the BPA and IP Co. systems at Baker, it will be necessary to extend the Administration's Pendleton-La Grande 230-kilovolt line to Baker, Oreg., a distance of 43 miles. Installation of terminal equipment, including a 50-megavolt-ampere step-down transformer and a 12-megavolt-ampere booster transformer will be required at Baker to provide the 138-kilovolt voltage level necessary.

It will also be necessary for the IP Co. to convert the new Ontario-Baker line from its present operating level of 69 to 138 kilovolts. This circuit has been constructed for ultimate operation at 138 kilovolts and it is understood that the line is now insulated for the higher level. As pointed out later in this report, sound engineering would dictate the desirability for conversion of this circuit to 138 kilovolts even if the Baker tie is not completed. Along with this conversion, it may be necessary for the IP Co. to add some 138- to 69-kilovolt transformation in the Baker or Huntington area.

The proposed Oregon-Idaho interconnection at Baker will provide important benefits not only to the State of Washington and Oregon but also to the southern Idaho-Utah area. It is a logical and necessary system addition to the entire Northwest power pool, and provides the most satisfactory means for transmitting temporary power surpluses from southern Idaho and Utah to Washington and Oregon, as well as for utilizing temporary hydro power surpluses to displace steam generation in Utah. The additional power made available in Washington and Oregon, the decrease in transmission losses, and the savings in steam generated energy in Utah, plus other benefits developed during the course of the analyzer study would be more than sufficient to cover the cost to achieve them.

Usable surplus in southern Idaho and Utah–northern Oregon-Idaho tie

The San Francisco office of the Federal Power Commission furnished data on monthly power and energy surplus on the Idaho Power Co. and Utah Power & Light Co. systems for the period of October 1953 through December 1956. The data includes information supplied by the Idaho Power Co. and the Utah Power & Light Co., as well as Federal Power Commission staff estimates based on reports by the companies to the Defense Electric Power Administration.

TABLE I.—*Surplus available in southern Idaho and Utah, megawatts*

	Peak surplus			Average surplus		
	Idaho	Utah	Total	Idaho	Utah	Total
1953–54 (median water):						
October	43	59	102	20	78	98
November	44	43	87	17	72	89
December	36	32	68	7	60	[1] 67
January	40	43	83	8	60	[1] 68
February	43	55	98	9	74	[1] 83
March	62	85	147	12	82	[1] 94
April	74	91	165	69	105	[1] 174
1954–55 (median water):						
September	59	27	86	11	40	[2] 51
October	84	11	95	40	38	[2] 78
November	59	−7	52	15	32	[2] 47
December	50	−18	32	3	20	[2] 23
January	37	−36	1	4	14	[2] 18
February	61	8	69	7	33	[2] 40
March	93	57	150	16	50	[2] 66
April	82	55	137	55	73	[2] 128
May	55	66	121	23	65	88
June	42	47	89	[3] −12	55	43
July	25	34	59	[3] −31	42	11
August	12	25	37	[3] −31	32	1
Critical water:						
June				[4] −29	54	25
July				[4] −36	43	7
August				[4] −32	33	1
1955–56 (median water):						
September	20	13	33	−21	29	[5] 8
October	52	76	128	10	98	[5] 108
November	19	49	68	−19	87	[5] 68
December	13	40	53	−33	73	[5] 40

[1] Average, Dec. 1–Apr. 15, 89 megawatts.
[2] Average, Sept. 1–Apr. 15, 52 megawatts.
[3] Average, 25 megawatts.
[4] Average, 32 megawatts.
[5] Average, 56 megawatts.

Source: Based on data received from FPC, San Francisco, on Dec. 3, 1951, Dec. 5, 1951, Dec. 7, 1951, and Jan. 27, 1952. Assumptions: No deductions have been made for maintenance or reserves. Ox Bow Plant is not included.

During the critical period of December 1, 1953, to April 15, 1954, the energy surplus in the combined southern Idaho-Utah systems will be 89,000 average kilowatts, of which 73,000 kilowatts is in the Utah system. The analyzer studies indicate that of this 73,000-kilowatt surplus in Utah, only 19,000 kilowatts can be transmitted to the balance of the Northwest power pool over the present interconnection without overloading the 150-kilovolt transformers at Grace and Anaconda. Of the 16,000 kilowatt surplus in the southern Idaho system, less than 10,000 kilowatts can be transmitted over the present system to the balance of the Northwest power pool without loading the 96-mile Twin Falls-Minidoka-American Falls line to above its stability limit. An additional limiting factor is the 110 kilovolt ties between the Montana Power Co. and the Washington Water Power Co. over which a portion of the southern Idaho-Utah surplus flows into the western group. These circuits limit the total power flow from Montana to Washington and this extra loading tends to further aggravate the restriction of these circuits.

System limitations as described above will reduce the capability of the Grace-Anaconda interconnection circuit for power flows northward from the present value of 45,000 average kilowatts to less than 30,000 kilowatts by January 1954. To restore this interconnection circuit to its present capability without wasting hydro energy on the I. P. Co. system will require: (1) installation of additional transformer capacity at Grace and Anaconda, (2) advancing construction of the proposed line between Lower Salmon (King) and American Falls by 1 year, and (3) some step to reduce the loadings on the Thompson Falls-Crow Creek circuits. Even with these additions, the Grace-Anaconda line will still limit the use of surplus in southern Idaho and Utah to 45,000 kilowatts of the 89,000 average kilowatts available. Hence, in 1953–54, unless the Baker interconnection is constructed, almost 45,000 kilowatts will be available in southern Idaho and Utah but not transmittible to the balance of the power pool simultaneously with a power shortage in Washington and Oregon.

During the critical period from September 1954 to April 15, 1955, the average surplus in the southern Idaho-Utah area is 52,000 kilowatts as shown in table I. Of this amount, 36,000 kilowatts is on the Utah Power & Light Co. system and 16,000 kilowatts in southern Idaho, based on generation additions indicated by the utilities.

As in the previous year, the existing Grace and Anaconda transformers will reduce the capability of the Grace-Anaconda interconnection from its present value of 45,000 average kilowatts to 30,000 kilowatts. However, due to the monthly distribution of the southern Idaho-Utah surplus, only 28,000 average kilowatts of the 52,000-kilowatt surplus in that area can be transmitted over the existing tie line unless additional transformation is installed at Grace and Anaconda. Even if these transformers are installed, only 38,000 average kilowatts of the surplus can be utilized because of the limitation of the Grace-Anaconda line and the monthly distribution of the surplus. The above-described conditions are summarized in table II.

Although no studies were made on the network analyzer for conditions beyond 1955, it is quite obvious that the present Grace-Anaconda interconnection will become an increasingly serious restriction to the proper operation of the Northwest power pool. This is particularly true when additional generation in southern Idaho such as the Palisades plant of the USBR as well as other proposed plants are given consideration.

Usable surplus in southern Idaho and Utah, with Oregon-Idaho tie

The Baker tie provides a much more direct path whereby the power surplus in southern Idaho and Utah can flow into the major coastal load centers and avoid the circuitous and restricted path across western Montana, northern Idaho, and Washington. This permits almost all of the indicated surplus in southern Idaho and Utah to be transmitted to the remaining systems of the power pool without additions to the Grace and Anaconda substations and without advancing construction of the lower Salmon (King)-American Falls circuit.

During the critical period of December 1953–April 15, 1954, 74,000 average kilowatts of the indicated surplus of 89,000 kilowatts can be transmitted to the west and north—after allowing for the monthly distribution of the surplus—and is limited to this value again by the Grace and Anaconda transformers. This represents an additional power resource in Washington and Oregon of 45,000 average kilowatts during this critical period as a result of the Baker tie. The installation of relatively small additional transformations at Grace and Anaconda along with the Baker tie will permit full use of the entire surplus in southern Idaho and Utah. Since, as pointed out below, the additions at Grace and Anaconda are of only temporary benefit, their installation appears to be inadvisable.

In the critical period of September 1954 to April 15, 1955, the entire 52,000 average kilowatt surplus in southern Idaho and Utah is usable without additional installations at Grace and Anaconda. Thus, the power resources in Oregon and Washington are increased by 24,000 average kilowatts as a result of the Baker tie.

The above-described conditions are summarized for easy comparison in the following tabulation:

TABLE II

	December 1953–Apr. 15, 1954	September 1954–Apr. 15, 1955
	Average megawatts	*Average megawatts*
Surplus available in south Idaho-Utah	89	52
Usable surplus without Baker tie:		
No unscheduled system additions	29	28
Unusable surplus	60	24
Usable surplus without Baker tie:		
With system additions to permit maximum possible use of Grace-Anaconda line	45	38
Unusable surplus	44	14
Usable surplus with Baker tie:		
No unscheduled system additions	74	52
Unusable surplus	15	0
Additional power made usable by Baker tie	45	24
Decrease in system losses as result of Baker tie [1]	10	13
Total increase in power supply in Washington and Oregon resulting from Baker tie	55	37

[1] Assuming power imported from south Idaho-Utah is consumed in the vicinity of Grand Coulee or Spokane. This decrease in losses will vary widely with assumed location of new loads to absorb south Idaho-Utah surplus.

Summer deficiency in southern Idaho and Utah—no Baker tie

Table I indicates that the I. P. Co. will be deficient in energy during the summer months of 1955 in the amount of 25 to 32 average megawatts, depending on water conditions in the Snake River Basin. From the point of view of conservation of natural resources, and economy of operation of the Utah power resources, this deficiency should be supplied from surplus hydro energy in the western group of the power pool. Although the U. P. & L. Co. has sufficient surplus in the summer of 1955 to supply all of the I. P. Co. deficiency, the energy available in Utah is in the form of steam generation and would require the use of natural fuels. Over-all economy would be served by transmitting hydro energy from the west into southern Idaho and Utah not only to supply the deficiency of the I. P. Co. but in addition to furnish as much energy as possible for replacing Utah steam.

The analyzer study shows quite clearly that in the summer of 1955 the present Grace-Anaconda interconnection will be almost useless in the summer months. Heavy power flows between Grand Coulee, Spokane, and western Montana will fully load all circuits to the point that no hydro power from the west can flow southward into southern Idaho and Utah via Anaconda. Therefore, it will be necessary for the U. P. & L. Co. to operate all of its steam resources at a relatively high load factor in order to supply the I. P. Co. deficiency. To permit savings of natural fuels in Utah without the Baker tie, it would be necessary to construct additional major transmission facilities between Grand Coulee and western Montana.

Summer deficiency in southern Idaho and Utah—with Baker tie

The Baker tie will provide a path whereby surplus summer energy in Washington and Oregon can flow into southern Idaho and Utah without increasing the loading on the critical circuits across northern Idaho. In fact, when the Baker tie is closed and fully loaded, some 15 megawatts will flow northward into Montana over the Grace-Anaconda line, tending to unload the northern Idaho-tie circuits.

The baker tie will permit some 66 megawatts of power to flow into southern Idaho, and Utah for the purpose of supplying the energy deficiency in the I. P. Co. system and for replacing steam in Utah. Since no energy can be supplied into the area over the existing tie line without the Baker tie, this facility is an important transmission link.

The proposed interconnection at Baker will also have an important beneficial effect on transmission losses. The studies indicate that the Baker tie will reduce these losses by between 30 and 40 megawatts when heavy power flows into southern Idaho and Utah are necessary.

Effect of proposed Ox Bow plant

Because of the controversial nature of the I. P. Co. proposed hydro plant on the Snake River at Ox Bow, it was decided that the plant should not be included on the analyzer, since a great many more cases would be necessary. However, if this plant should be constructed as per present schedules, the Baker tie would be of even greater value. The effect of the Ox Bow plant would be to further increase the surplus energy in southern Idaho during the critical period from September through mid-April. Since only a small portion of the available surplus in southern Idaho and Utah, even without this plant, can be transmitted over the existing Grace-Anaconda tie line, the Oregon-Idaho tie at Baker would be of greater importance if the Ox Bow plant is constructed.

The Ox Bow plant would of course decrease the summertime energy deficiency on the I. P. Co. system and would relieve the necessity for importing hydro energy from Oregon and Washington for the purpose of supplying this deficiency. However, the Baker tie would still be extremely useful in the summer months for decreasing the fuel-generated energy in Utah and for relieving the heavily loaded transmission circuits between Grand Coulee, Spokane, and western Montana.

The above general considerations would apply to any new hydro generation developed in south Idaho or Utah, such as the Palisades plant of the USBR or the Guffy plant of the Idaho Power Co.

I. P. Co. Ontario-Baker circuits

In order to accomplish an interconnection between Oregon and Idaho at Baker using a 50-megavolt-ampere transformer now on hand, it will be necessary for the I. P. Co. to convert its new Ontario-Huntington-Baker line to 138 kilovolts. This circuit is now operating at 69 kilovolts, although the construction and insulation was designed for ultimate operation at the higher level. It is believed that

sound engineering and conservation of critical materials indicates that such conversion is desirable even if the Baker tie does not become a reality in the near future.

System expansion plans in the Ontario-Baker area as indicated by I. P. Co. for this study show the present two circuits operating at 69 kilovolts and call for a third circuit between Ontario and Huntington to be constructed in 1953 or 1954. According to these plans, this third circuit would also be of 138-kilovolt construction but operated initially at 69 kilovolts.

This study indicates that if the Ontario-Baker No. 2 line were converted to 138-kilovolt operation, construction of the third Ontario-Huntington circuit would be delayed, if not eliminated. Thus, critical line materials would be conserved even though addition of 138–69-kilovolt transformation might be necessary at Huntington or Baker.

Voltage relationships

Construction by BPA of a substation at La Grande, Oreg., containing 230/115 to 69-kilovolt transformation and an interconnection at 69 kilovolts with the existing transmission system in Union County, raises the question of interconnecting BPA, California-Pacific Utilities Co., and the I. P. Co. at 69 kilovolts. At the present time, the California-Pacific Utilities Co. is supplied at 69 kilovolts by the I. P. Co. via Baker. Service to La Grande and other load points on the California-Pacific Utilities Co. system is via 69-kilovolt and 23-kilovolt circuits extending from the point of interconnection at Baker.

At the time the BPA La Grande substation is placed in operation, it will be necessary to segregate the present California-Pacific Utilities Co. system in order to serve any portion of this system over the BPA facilities. This is necessary because of the 30-degree relationship between the BPA 69-kilovolt bus at La Grande and the 69-kilovolt system of the I. P. Co.

Static capacitor installation at Baker

In certain of the cases prepared during the course of this analyzer study, it appeared that a rather large bank of static capacitors should be installed at Baker on the tertiary of the tie transformer. It is believed, however, that no decision in this regard can be made on the basis of the analyzer study alone.

The I. P. Co. and U. P. & L. Co. did not supply the reactive requirements of their systems for this study. It was necessary therefore to approximate the needed data and this was done using published reports of the Northwest Power Pool as a basis. The data prepared in this manner indicates that the I. P. Co. is quite short of reactive and in all cases prepared on the analyzer imported considerable quantities of reactive from the interconnected utilities. If the data used in this study is essentially correct, it appears that better system operation by I. P. Co. would be obtained if that company expanded its plans to include an adequate reactive supply. If the reactive requirements used in this study were too high, such additions may not be required. In any event, the installation of a large bank of static capacitors at Baker should be left open until a final determination of the I. P. Co. reactive situation can be made.

Senator CORDON. For instance, at one time you had 45,000 kilowatts. That dropped down to 24,000.

I would like to have the figures in such shape that we can pinpoint exactly what would come in, if it were needed for Hanford. I am not considering the matter of power flowing back into the area from Bonneville.

Mr. RAVER. The present estimates indicate that the surplus we are talking about now will disappear.

Senator CORDON. That is what my understanding is.

Mr. RAVER. This is proposed as an interim arrangement until additional generating capacity can be made available at Hanford to take care of the situation.

Now, if no additional capacity is going to be made available, we have not solved the problem at Hanford by the tie except for a short period of time.

Senator CORDON. We have discussed this situation at Hanford at various times. Can we put into the record the statement of the

amount of energy used by Hanford and what they expect? If that cannot be done, I would like to have it furnished to me personally.

Mr. RAVER. Well, that information has been in a classified or restricted category. I will check with the Hanford people as to present status.

Senator CORDON. Pardon?

Mr. RAVER. We have been restricted on that information and we have never put it in a record.

But I am quite sure I can give it to you.

Senator CORDON. I do not want it in the record if it cannot go in there.

In that event, however, I would like to have it furnished to the chairman for my use.

Mr. RAVER. I will be glad to provide that.

(The information referred to appears on pp. 1618-1619.)

Senator CORDON. I think that covers it, Mr. Chairman, as far as I am concerned. I think the question of the intertie between La Grande and Baker has to rise or fall on its necessity for Hanford. I will say very frankly that as far as I am concerned, I am not disposed toward really extending myself to help out Hanford. Hanford has had a chance to help itself and would not do it.

Now, I would like to be able to determine the amount of energy that might be made available over this intertie that we could not get otherwise for at least at the same price. I think we could get it at much less cost by building the capacity over at the other end, but we do not need to consider that here.

If we can get the amount of power that will flow over the intertie and then this information which is restricted as to the total amount needed, we can see the extent to which they can be aided by the La Grande-Baker intertie.

Senator HAYDEN. Does that conclude your examination?

Senator CORDON. Yes.

Senator HAYDEN. Well, it is getting pretty close to noon.

LETTER TO SENATOR MCKELLAR REGARDING INTERTIE

The only thing that I have at hand is a letter addressed to Senator McKellar from Mr. Bryon C. Brinton, editor and publisher of the Record-Courier of Baker, Oreg., to which he has attached the names of certain citizens of that city who say that they do not agree with the Baker Chamber of Commerce with reference to the LaGrande-Baker intertie.

Senator McKellar has requested that this letter be inserted in the record.

(The letter and attachment referred to follow:)

THE RECORD-COURIER,
Baker, Oreg., March 12, 1952.

Hon. KENNETH MCKELLAR,
Chairman, Appropriations Committee, Senate Office Building,
Washington, D. C.

MY DEAR SENATOR MCKELLAR: Monday, March 10, 1952, the board of directors of the Baker Chamber of Commerce, in response to a personal appeal by the head of the local power company, passed a resolution opposing the Baker-LaGrande intertie.

This action does not in any way represent the business community of Baker. Enclosed is a copy of a telegram indicating the sentiment of the business people of this community on this subject.

We think this power intertie is particularly urgent not only from the point of view of realizing immediate power benefits for national defense but also from the standpoint of over-all resource development for this area. We will appreciate your doing what you can to maintain this important item in the present budget.

Very sincerely yours,

BYRON C. BRINTON,
Editor and Publisher.

Hon. MICHAEL J. KIRWAN,
Chairman, Interior Appropriations Subcommittee,
House of Representatives, House Office Building,
Washington 25, D. C.

Baker Chamber action in opposing Baker-La Grande intertie does not represent sentiment of business people of Baker.

Gladys McDonald: The Crafts Shop
Ethel M. Troyer: Ben Franklin Store
Rod M. Crosby: Payless for Drugs
Sherman Allen: Payless for Drugs
Melvin Barton: Barton's Music
Jesse Heard: Log Cabin
Max Dixon: McGinnis Cigar Store
Leo Hurly: Mint
Paul York: Silven's Laundry
Omer F. George: Harley-Davidson
J. W. Crawford: Crawford Insurance Agency
Melvin Hess: Hess Lumber Co.
Fred J. Young: Young Insurance Agency
G. Neuberger: Neuberger & Heilner
Bob Bratt: Ryder Bros.
Lloyd Storzbach: Barber Shop
Raymond W. Brown: Pastime Cigar Store
Irwin Wulf: Taxicab 13
Ernest Stoddard
Bert Neuberger: Baker Furniture
F. L. Clubb: Clubb's Super Cream
Sterling May: May's
Eleanor Fisk: Flowers
C. E. Jackson: Jackson's Food Market
Brown Sales Co.: Elmer Brown
H. E. Hunt: Hunt's Chevron Service
E. E. Shannon: Geiser Hotel
Farris Shannon: Shannon Lumber Co.
Walter G. Erwin: Taxi
W. D. Petersen: Baker Packing Co.
Etta F. Cunning: The Book Nook
E. M. Mineff: Barber
J. F. Paradise: Barber
K. J. Kofford: Barber
Dorothy Bradshaw: Baker Garage
E. M. Frericks: Frericks' Richfield Service
Neil Moura: 2820 Broadway
Sam Lay: 2820 Broadway
Ray Lewis: 2805 Broadway
Bert Basche: 1798 Campbell
Wallace D. Shephard: 1410 Dewey
Carl Cloud: Realtor
Francis Mann: Plumbing
Roy E. Hale: Beauty Shop
Guy Church: 3048 Campbell
H. W. Miller: 2790 Church
Francis Chaves: Chaves Food Market
Carl F. Holman: Holman Studio

The following list of names was received too late to necessitate wiring; however, they have been forwarded by airmail:

Jack Martin the Roofer
F. O. Dunnington: Baker Apartments
E. R. Curfman: Real Estate and Insurance
Fred E. Gray: Universal Radio & Sound
Paul Van Arsdale: Mining Interests
F. M. Gunn: Real Estate
Albert C. Ullman: Real Estate and Construction
Arthur L. Carlsen: Carlsen Lumber
Wood & Wood: Woodworks
G. Lowell Fuller: Insurance
Allen L. Johnson: Shady Park Court

COMMUNICATIONS IN REGARD TO LA GRANDE-BAKER INTERTIE

Senator CORDON. I have been requested to present two statements for the record. I should have brought them over so that Dr. Raver might read them and comment on them, if he wanted to do that.

(Letter of Dr. Raver follows statement and insertions of Mr. Kime and appears on pp. 106-107.)

Senator CORDON. I will be glad to get them, and we can hear him a little later.

One was from Mr. Elmer Kime who is vice president of the California-Pacific Utilities Co. serving the La Grande-Baker area. The other is from an attorney in Baker, named Blaine Hallock.

Then I have 30 or 40 letters on the subject that I will present for the record, if I may, from various individuals.

Senator HAYDEN. That may be done.

(The material referred to follows:)

STATEMENT OF CALIFORNIA-PACIFIC UTILITIES CO.

My name is Elmer E. Kime. I am vice president of the California-Pacific Utilities Co. with division offices located at Baker, Oreg. I am appearing here today in opposition to the Bonneville Power Administration's request for an appropriation in the amount of $1,173,000 to begin construction of a 50-mile, 230-kilovolt transmission line from La Grande to Baker, Oreg. Total costs are estimated at $2,250,000, not including substation. This proposed transmission line, funds for which were turned down by Congress last year, will cut directly through the heart of our service territory and parallel our transmission facilities.

In opposing this new construction by the BPA, I want to state categorically to this committee that if and when additional transmission facilities are needed in our service area to interconnect or integrate our system with those of other power suppliers located adjacent to us, my company stands ready, willing, and able to construct such facilities as are necessary and to transmit power and energy through our system under mutually satisfactory contractual arrangements.

The California-Pacific Utilities Co. now serves more than 15,000 electric customers in a 20,000-square-mile area covering most of four counties in eastern Oregon. About 50,000 people live in this area. Our company is small, but we furnish electricity to every town and community, including service to over 99 percent of all the farms within our territory.

We have always kept our construction program in advance of the area's requirements and pledge to you and to the people of eastern Oregon that this policy will continue. This statement can be documented by an editorial appearing in the Baker Democrat-Herald, of Baker, Oreg., on December 3, 1951, relative to our company and in the service it renders to our area (and I quote).

"The new Huntington-Baker transmission line to the facilities here of the California-Pacific Utilities Co., which was officially connected here Friday before a group of public officials of Baker and Union Counties, will provide this area with double the present power capacity. When operated at full capacity the line will provide four times as much power as at present. The two circuits between Baker and Huntington are built far enough apart so that in event of severe storms, only one line might be put out of service. The total cost of the line and the additional facilities at the Baker substation is about $750,000.

"The increased use of electrical energy in this area in the last few years is an encouraging sign. While the population has not increased, greater electrical use indicates a larger volume of business and a better standard of living. The local utility has forecast continued increases and is already prepared to meet those increases even though they might be substantial ones.

"While other sections of Oregon, dependent upon public power supplies, are suffering from lack of power, this area—dependent solely upon private enterprise—has all the power it can use now, and has no worries as to future supplies.

"The new power connection in Baker proves conclusively that private enterprise with foresight and initiative gets the job done more economically and with much greater speed than any other type of agency."

Attached to my statement is a map showing the electric transmission lines in the four-county area served by our company. We are presently operating a 69-kilovolt line extending from Baker to La Grande, and we have a second 69-kilovolt line, insulated for 138 kilovolts, projected for construction, when needed, which

will double our capacity between these points. The fundamental design, engineering and line routes are now well established. You will also note a 69-kilovolt line from La Grande to Elgin, Oreg., which is now under construction. Eight miles or one third is completed, the balance is scheduled for 1952.

During the past year we have extended central station service to an area including Fox and Long Creek, Oreg., supplanting an isolated oil engine plant.

During the past 5½ years we have added over 13,000 horsepower of commercial and industrial motor loads to our lines. Peak demands have increased 155 percent and we are selling 168 percent more kilowatt-hours. Rural line mileage increased 118 percent and substation capacities 120 percent. The investment required to reach these goals has been considerable, as you can well understand.

Load and use studies projected to 1960 delineate our future needs, and plans have been made to take care of this expanded use of electricity. By 1960, we anticipate a peak demand in our area of about 45,000 kilowatts, which will be almost twice our peak demands to date. Over 2 years ago we negotiated firm, long-term contracts with our suppliers. Idaho Power Co. has constructed a new 138,000-volt transmission line to Baker, Oreg., the central point of our operation. This line provided us with the capacity we need now and over the immediate future years. This year we are completing a 69,000-volt line from an Idaho Power Co. connection near Unity, Oreg., to Prairie City, Oreg. This will give a second source of firm power for Grant and Harney Counties in a minimum amount of 10,000 kilowatts. Transformers to take this power into our system are scheduled for delivery in June of this year. When this phase of our transmission program is completed, we will have added a total of 62,500 kilowatts of capacity from all sources since July 1, 1946. This is about four times our combined 1946 supply.

The foregoing statements establish the fact that we have been taking care of the needs of the area we serve, and, further, that we have anticipated and will provide for its future growth. Should this growth require facilities in excess of those now anticipated, we will make adjustments in our program to the end that a firm supply of power will be available.

In previous years efforts have been made to discredit our ability to serve the area in which we operate, but the facts remain; no customer has been denied service in any amount—all obligations have been fulfilled.

It is our belief such attacks and insinuations are wholly unjustified unless they are being used to create a background for a second invasion of our service area by the Bonneville Power Administration. If past patterns are any criterion, such strategy will be followed by municipal ownership or Peoples Utility District agitation designed to turn our service area into public ownership.

Now, our fear regarding the La Grande-Baker, Oreg., line has been fully justified by receipt of an original letter directed to the city of Baker, Oreg., by the Bonneville Power Administration, dated May 16, 1951. A photostatic copy of the letter is attached. To us it is an appalling condition, that prior to any congressional consideration or approval, or allocation of funds, direct solicitations have been made to sell power, and delivery dates proposed.

We can only interpret this type of act as a premediated means to incite the city of Baker toward direct action on behalf of the Bonneville Power Administration and against our company.

We also believe such actions are unjustified, detrimental to our business efforts, completely unfair but evidently necessary to promote the aims of the Bonneville Power Administration without regard to any moral concept of business. It is further proof of the continuance of the public power promotion by Bonneville Administration, revealed in the Robert E. Lee report as published in the Congressional Record, March 29, 1949.

We have seen construction start on a 230 kilovolt transmission line from McNary Dam to La Grande, Oreg., at an estimated cost of $3,331,000. This line is scheduled for completion this year. To our knowledge, no customer is available to receive power from this line at present. As the result, however, the Union County Public Utility District is now attempting to condemn most of our properties in Union County, with success or failure unknown.

In justifying the McNary-La Grande line, Bonneville last year stated that this line "will relieve an imminent power shortage in Union, Baker, and eastern Grant Counties of Oregon" and make power "available for future interconnection with the California-Pacific Utilities Co."

Now, in an effort to justify this 230-kilovolt line from La Grande to Baker, the Bonneville Power Administration has suddenly discovered that electric systems to the east are inadequate. According to this year's justifications, the purpose of the La Grande-Baker line is to reinforce the transmission facilities serving the Idaho and Utah systems. In short, Bonneville first justified this line to bring

power to our area and is now justifying extension of it to haul power out of the area through interconnection with Idaho Power Co. The confusing of issues and the means used to justify expenditures are mystifying until the end result becomes obvious.

Thus, the question arises—what will Bonneville's next request be? Will it be authorization to construct duplicating transmission lines through Idaho Power Co.'s area to interconnect with the Utah Power & Light Co. and next with the Montana company, thus achieving fulfillment of its advance program announced several years ago? Is this a piecemeal attempt to attain the larger over-all program which was previously turned down by Congress?

The La Grande-Baker line has also been requested to "provide the most satisfactory means for transmitting temporary power surpluses from southern Idaho to Washington and Oregon, as well as for utilizing temporary hydro-power surpluses to displace steam in the Idaho-Utah area." I cannot testify for the companies to the east or for the BPA as to the availability of temporary hydro power for transmission from Bonneville into Idaho-Utah area or to the availability of steam power in Idaho and Utah for transmission to the Bonneville area. I am in the position to state, however, that if and when power exchange contracts are negotiated between the Bonneville Power Administration in the Pacific Northwest and the private companies in the Rocky Mountain area, the California-Pacific Utilities Co. will enter into power-wheeling contracts to transmit this power through its system for the mutual benefit of the contracting parties. If our facilities are not adequate for this purpose, we stand ready, willing, and able to begin immediate construction of the necessary facilities just as soon as the requirements are made known to us.

We, the California-Pacific Utilities Co., have an obligation to our customers to give our energies toward the providing of good electric service at proper rates. Years of effort and large sums of money have been expended in the building of our area. We have prepared for the future needs of our area in a proper manner and in accordance with requirements of State regulatory commissions. We have never denied service to anyone—individual or industry—and have never yet failed to secure the needed financing to pay for our rapidly expanding service.

For years we have followed the progress of BPA transmission construction in the Northwest. We live closely with these things and we have seen how their activities have led to the slow but certain toppling of segments of electric companies.

If you give us the opportunity to go forward and to continue the development of our area under the private-enterprise system by refusing this unnecessary BPA request, we not only pledge continuation of adequate service to the area at reasonable rates, but a full cooperation with you in this critical period in American history.

Respectfully submitted.

ELMER E. KIME,
Vice President, California-Pacific Utilities Co.

This statement prepared March 18, 1952.

DEPARTMENT OF THE INTERIOR,
BONNEVILLE POWER ADMINISTRATION,
Mid-Columbia District Office, May 16, 1951.

Mr. G. S. VERGEER,
City Manager, City of Baker,
Baker, Oreg.

DEAR MR. VERGEER: Subject to the availability of appropriations and materials for this purpose, the Bonneville Administration proposes to energize by December of 1954 a 220–66-kilovolt substation in the vicinity of Baker, Oreg. The substation will be one of the 220-kilovolt transmission lines connecting the Hells Canyon Dam with the Administration's system.

The enclosed copy of the Administration's advance program will give you further details.

Power from the proposed Baker substation could be made available to the city of Baker under the usual type of contract and rate schedules available to a preferred customer. I am enclosing a copy of the Administration's wholesale power-rate schedules for your information.

If the city of Baker is interested in purchasing power from the Bonneville Administration, I would appreciate receiving from you an estimate of the city's requirements.

Sincerely yours,

H. R. RICHMOND, Jr., *Manager.*

ELECTRIC LINES OF

CALIFORNIA PACIFIC UTILITIES COMPANY

AND OTHERS

IN EASTERN OREGON

SCALE OF MILES

JANUARY, 1952

LEGEND

PRESENT POWER LINES

California Pacific Utilities Company

69 KV Lines

22 KV Lines

Other Voltages

Idaho Power Company

Bonneville Power Administration

PROPOSED POWER LINES

California Pacific Utilities Company

69 KV Lines

22 KV Lines

Idaho Power Company

Bonneville Power Administration

1952

1952-1956

STATEMENT OF MR. PAUL J. RAVER

DEPARTMENT OF THE INTERIOR,
BONNEVILLE POWER ADMINISTRATION,
Washington, D. C., April 23, 1952.

Hon. GUY CORDON,
United States Senate, Washington, D. C.

MY DEAR SENATOR CORDON: In response to your request, I am offering my comments on the statement of California-Pacific Utilities Co. before United States Senate Subcommittee on Interior Appropriations. This statement, signed by Mr. Elmer E. Kime, vice president of the company, was submitted in opposition to the Administration's request in the fiscal year 1953 program to begin construction of the La Grande-Baker transmission line.

A large portion of Mr. Kime's statement is devoted toward discussion of the successful job done by his company in supplying the power needs of the area it serves. We have no comment on this portion of the statement and certainly do not disagree with the expressed objectives of the company to adequately and economically serve its customers. It is our belief that the proposed tie line not only will not interfere with the company's operation but should aid it to fulfill these worth-while purposes.

With respect to other matters contained in his statement it appears that Mr. Kime has a misconception of the purposes of the proposed La Grande-Baker line or is in error on certain basic facts. First of all, Mr. Kime states that if and when additional transmission facilities are needed to interconnect or integrate his system with those of other power suppliers located adjacent to his company's system, his company stands willing and able to construct such facilities. Bonneville's proposal is not to interconnect with the California-Pacific Utilities Co., but rather with the Idaho Power Co. With due regard to Mr. Kime's statement that his company is able to build such an interconnection, it would appear unrealistic for the company to do so. Their experience has been devoted to the building of relatively small 69-kilovolt lines and it would seem not to their advantage for them to build a high-capacity 230-kilovolt line solely as an intermediary between two major systems. Of significance is the fact that the total capacity of the company's system in eastern Oregon is on the order of 23,000 kilowatts, whereas the amount of power to be interchanged over the tie would be on the order of 60,000 to 80,000 kilowatts initially and in later years would probably be as high as 200,000 kilowatts. It is agreed, however, that the ownership of the tie makes no difference in the benefits derived therefrom.

The company has stated that no customer is available to receive power at La Grande, Oreg., from the Administration's McNary-La Grande line. This is not so. Pacific Power & Light Co. has requested service from the Administration at La Grande. In addition, while not wishing to enter into any controversy with the company on this point, we are convinced that the power demands of the La Grande, Oreg., area will require a connection between our respective systems at La Grande.

Mr. Kime would give the impression that the Administration has been inconsistent in justifying the McNary-La Grande line, on the basis that it was first proposed to relieve a power shortage in Union, Baker, and eastern Grant Counties of Oregon, and now is justified to reinforce the transmission facilities serving the Idaho and Utah system. There has been no change in the Administration's basic justifications. In addition to the purposes mentioned by the company, there are other purposes to be served by the tie, as fully stated in the Administration's budget presentations.

Some comment is required concerning Mr. Kime's question: "What will Bonneville's next request be? Will it be authorization to construct duplicating transmission lines through the Idaho Power Co.'s area * * *?" It is significant to observe that Mr. Kime cannot point out a single transmission line built by BPA that duplicates the transmission lines of private power companies, in the sense that he uses the term. He is also in error in assuming that BPA proposes to transmit power through his system to the Idaho Power Co. The La Grande-Baker line would in effect bypass his company's system, while at the same time would reinforce service to his company's service area by making the power supply more reliable.

Mr. Kime's statement includes a letter from BPA, dated May 16, 1951, to the city of Baker. This is presented as proof that BPA has solicited the city of Baker to become a BPA power customer. Mr. Kime interprets this action as a premeditated means to incite the City of Baker against his company to the advantage of Bonneville. Apparently Mr. Kime was not aware of the city's inquiry of

May 11, 1951, to Bonneville, to which inquiry the Administration's letter of May 16 was a reply. A copy of the city's May 11, 1951, letter is attached.

Sincerely yours,

PAUL J. RAVER, *Administrator.*

CITY OF BAKER, OREG., *May 11, 1951.*

BONNEVILLE POWER ADMINISTRATION,
Walla Walla, Wash.

GENTLEMEN: The undersigned noted an article recently whereby it was contemplated to construct a Baker substation in 1953.

Inasmuch as the city of Baker is a wholesale purchaser of power at the present time, the writer is very much interested in being advised as to the availability of service for this city's use and what rate structures would apply.

Kindly keep me informed of any definite authorizations for construction in this connection.

Yours truly,

G. S. VERGEER, *City Manager.*

STATEMENT OF BLAINE HALLOCK

My name is Blaine Hallock. I am a lawyer. I live in Baker, Oreg., where I have been practicing my profession for more than 33 years. I appear before this committee as the accredited representative of the Baker County Chamber of Commerce, the Baker County Taxpayers' League, and the Snake River Free Enterprise Associations of both Baker County, Oreg., and Washington County, Idaho.

I am not in the employ of any power company. On the contrary, my firm is handling three pending suits against Idaho Power Co., and one pending suit against California-Pacific Utilities Co.

I am not an electrical engineer. I know very little about kilowatt-hours, megawatts, voltage, high or low frequency, the construction of dams, transmission lines or power generating plants. However, because I have lived with, and have talked to so many people in the Northwest, I do know a great deal about their attitude toward ever-increasing encroachments of Federal Government in the field of private enterprise, and, particularly about their feeling toward the proposed $2,500,000 50-mile transmission line between Baker and LaGrande.

Since mid-June of 1947, various civic bodies of Baker County including the chamber of commerce, the county farm bureau, the Baker County Taxpayers' League, and the Snake River Free Enterprise Association have adopted resolutions, and have filed vigorous protests with the Army engineers, the Board of Engineers for Rivers and Harbors, the State legislature and the Congress, opposing, in no uncertain terms, the Bonneville Power Administration's obvious program of substituting public power for private enterprise.

The people of my community need this transmission line just about as much as they need a headache. They have no difficulty in seeing, in the proposal, but another "foot in the door" move on the part of public power propagandists to pave the way for people's utility districts, and for the construction of a high dam on Snake River. By overwhelming majorities people's utility districts were voted down as many as five times in eastern Oregon, by the electors of Baker, Malheur, and Harney Counties. No election involving such district has been held in Grant County because no group there would even sponsor the move.

On February 29, last, the International Brotherhood of Electrical Workers in Baker and Union Counties, Oreg., unanimously condemned the proposed transmission line, and included the following matter in their resolution.

"The continued extension of Federal public power is a direct threat to our system of free enterprise, and, as such, is not consistent with our belief. We urge that every effort be made to stop this continued encroachment of government in private industry, and in this effort we request your support."

On March 10 of this year the Baker County Chamber of Commerce, acting by its 15-member board of directors, unanimously adopted a resolution opposing the line. The resolution deplores the action of the Bonneville Power Administration in demanding an appropriation for the line at a time when the problem of critical metals is so acute, and when both industry and the military are struggling to meet the demands of national defense. The resolution recites in part.

"Under the circumstances, we feel that it is contrary to the public interest to expend this amount of money and critical material for the construction of a power line that cannot be said to be critically necessary. The Government agencies

should be the first ones to make sharp cuts in expending money and critical materials, and must limit such expenditures to projects absolutely necessary."

Incidentally, it requires courage and spirit on the part of the 15 directors of out local chamber of commerce, all of whom are businessmen, to unanimously adopt, and to make a public record of that resolution. On the other hand, it requires neither courage nor spirit to sign a petition or a telegram in favor of the proposed line which has been circulated by minority pressure groups.

The two Snake River Free Enterprise Associations, which I have mentioned, came into existence because of the deep resentment felt by so many of our people against the continuous and persistent propaganda emanating from the Interior Department, and from the Bonneville Power Administration. The proposed transmission line is but another entering wedge for the ultimate construction of Hells Canyon Dam. To build such a dam, even if authorized, would require not less than 7 years. The site of the proposed dam is some 70 or 80 miles distant from the Baker end of the proposed transmission line. During this period engineering ideas regarding location and construction details may, and undoubtedly will, change. At any rate, why spend another two and a half million dollars on a line which is not needed by anyone whomsoever. It is represented by the Bonneville Power Administration that the line is necessary to carry the excess power generated by the Idaho Power Co. It has already been shown, by experts who are qualified to speak on the subject, that any such excess developed either in Idaho, Utah, or Montana is already being delivered to the northwest through other lines of the Bonneville network in northern Washington.

Annual fixed charges on the proposed expenditure of $250,000,000 over a period of only 6 years, pending the construction of the Hells Canyon Dam, with interest calculated at 3 percent, depreciation at 3 percent, and operation and maintenance at 2 percent, will amount in round numbers to $1,200,000.

Our experience with Federal propagandists could not be better expressed than by quoting Representative Fenton when sitting as a member of the House Subcommittee on Appropriations. On February 7, last, he said:

"I think you gentlemen can see that the Bonneville Power Administration and the Bureau of Reclamation are pretty persistent people. They get knocked down one year and they come back the next year. My general advice to private enterprise is to be just as persistent, come back and keep fighting them."

Thanks to the energy and foresight of the Idaho Power Co. and the California-Pacific Utilities Co., our people are blessed with an abundance of power—approximately four times our present needs. I have carefully investigated this situation through some of my clients who are engaged in industry. Our local power company has never denied a request for increase of existing loads, nor a demand for additional power for new industrial ventures. In all the years that I have lived in Baker, we have never experienced either a black-out, a brown-out, or a dim-out. Yet such treatment has been threatened, not by any privately owned power company, but by our very Government itself. Our people are tired of these threats. They are weary of being told that unless the Government shall be permitted to build the Hells Canyon Dam they must suffer a black-out. If we ever do have that unhappy experience out where I live, the shortage in power can result only from the Government's refusal to allow our privately owned power companies to enlarge their capacity by the development of the Snake River.

The people whom I represent resent these continuous assaults upon free enterprise. They have repeatedly voted down the formation of a people's utility district in our county and in those counties to the east of us. They have repeatedly and publicly denounced the encroachment of Federal bureaucracy in the field of private business. The four organizations for whom I am appearing here represent the thinking of a vast majority of the thoughtful and substantial citizens of eastern Oregon and western Idaho. They believe that the railroad which serves our locality should remain in private ownership. They believe that the lumber mills which afford the bulk of our payrolls should remain in private ownership. They believe that our merchandising establishments, stock ranches, and farms should remain in private ownership. Particularly they believe that the well financed Idaho Power Co. and California-Pacific Utilities Co., which supply our people with abundant electrical energy at rates about 35 percent lower than the national average, should remain in private ownership. They are gravely concerned over the spread and dictatorial quality of government by bureaucracy. They are tired of reading the boldly asserted claims, wholly unsupported by the facts, that Federal control of the generation and distribution of electrical energy is cheaper and better than by private enterprise. They know, when considering their ever-increasing Federal income-tax contributions, that they are paying staggering prices for public power. For years they have done their utmost to

cut through Federal red tape and the mass of uneconomic restrictions and limitations imposed by Federal bureaus who would arrogate unto themselves all power development. They are eager to see the Idaho Power Co. granted authority to develop the power resources of the Snake River through employment of its own capital.

It is nothing short of tragic to witness the struggles of a capable, competent, and well-financed power company, with a forward-looking, modern power development program, frustrated on every hand by its own Government—a Government which is obviously attempting to put it, and apparently all other privately owned power companies as well, completely out of business. This tragedy is heightened when it is realized that, if private enterprise shall be permitted to do the job, millions of dollars in property values will be placed upon our tax rolls, with a corresponding reduction in our general taxes.

The people whom I represent can shed only crocodile tears over Mr. Straus' recent statement to the effect that, unless more Federal projects shall be approved, and more hundreds of millions of dollars shall be appropriated for their construction, his heavy force of engineers will be out of a job. They deplore the fact that the authors of this insidious propaganda, while claiming substantial profits through Government operation, persistently decline to mention that a large part of the huge capital outlays are never returned because so much of the investment is charged to nonrecoverable items like flood control, recreation, and aids to navigation. Our people know, from examples such as the huge American Telephone & Telegraph Co., the United States Steel Corp., and similar great enterprises, that private industry, if given any kind of a break, can do anything in the field of industry at less cost, and with far greater efficiency than can any agency of Government.

Let us assume that private enterprise, practicing all those economies which years of practical experience have taught, might likewise be accorded the advantages demanded by the Government in connection with its power operations. These include exemption from taxes, unlimited credit at a low interest rate, freedom from all form of control in the matter of rates and practices, the privilege of serving preferred customers at the expense of others, and the right to provide discriminatory rates as between classes of consumers. If any, to say nothing of all, of these advantages were accorded to private enterprise, what a flood of capital would be poured into their ventures.

The Idaho Power Co. neither seeks nor expects to receive any such advantage. It desires merely to be permitted to continue its laudable and efficient program of developing the power resources in its territory. It is ready, able, willing, and eager to carry out this program, and to build all necessary transmission lines, but it is denied that right because certain bureaucrats, drunk with power, are determined to put it completely out of business.

It was Woodrow Wilson who said, nearly 40 years ago:

"Liberty has never come from the government. The history of liberty is the history of the limitations of governmental power, not the increase of it."

This statement prepared March 20, 1952.

THE RECORD-COURIER,
Baker, Oreg., March 21, 1952.

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington 25, D. C.

MY DEAR SENATOR CORDON: Monday, March 10, 1952, the board of directors of the Baker Chamber of Commerce, in response to a personal appeal by the head of the local power company, passed a resolution opposing the Baker-La Grande intertie.

This action does not in any way represent the business community of Baker. Enclosed is a copy of a telegram indicating the sentiment of the business people of this community on this subject.[1]

We think this power intertie is particularly urgent not only from the point of view of realizing immediate power benefits for national defense but also from the standpoint of over-all resource development for this area. We will appreciate your doing what you can to maintain this important item in the present budget.

Very sincerely yours,

BYRON C. BRINTON,
Editor and Publisher.

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[1] Copy of telegram same as that appearing on p. 101.

BAKER, OREG., *February 29, 1952.*

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: We, the undersigned, as members of International Brotherhood of Electrical Workers (IBEW) in Baker and Union Counties, eastern Oregon, protest the appropriation of funds for constructing an electric transmission line from La Grande, Oreg., to Baker, Oreg., by the Bonneville Power Administration.

We further ask that this protest be placed in the record for review by the Appropriations Committee.

The continued extension of Federal public power is a direct threat to our system of free enterprise, and as such is not consistent with our belief.

We urge that every effort be made to stop this continued encroachment of Government in private industry, and in this effort we request your support.

Very truly yours,

Ferd Renz, Carl D. Parry, James B. Ego, Martin F. Bonham, Roy D. Kelley, C. O. Williams, Clarke Carnes, Robert W. Tally, Chas. Marshall, Oscar E. Miller, Marvin G. Blake, Paul E. Curts, George Courtney, Grant M. Tucker, Raymond Hobbs, William R. Putman, W. J. Snodgrass, A. L. Dahlstrom, C. E. Harrison, William R. Bailey, J. B. Ord, George B. Lampro, Wm. C. Gillette, Carl L. York, Bill I. Shively, Ira L. Yankey, Rolland B. Cole, H. D. Hansen, H. D. French, Hallie W. Carnes, Rice R. McHaley, Jr., R. R. Evans, Clarence L. Calder, Members of IBEW.

THE CITY OF BAKER,
Baker, Oreg., February 25, 1952.

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: The national budget and the requests of the several Government agencies for appropriations, I feel sure, is uppermost in your mind these days.

One of the items which I note by the Portland papers is coming on for consideration concerns deeply the citizens of Baker and Baker County. This is the request of the Bonneville Power Administration for funds, estimated to exceed 2¼ million dollars, to build a transmission line from La Grande to Baker, Oreg.

Several reasons for this request can be surmised, but in my opinion the need for this line does not now exist. This area has been and is now adequately served by the local utility, which provides Federal, State, county, and city taxes. I have lived in Baker 27 years, and, based upon the experience of these years, am confident that the California-Pacific Utilities Co. can and will build the proposed line from La Grande to Baker when needed. Further, I believe that this will be done whether future needs be for power locally, or for the transfer of power from east to west, or west to east.

You will agree, I believe, that divested of all raiment the issue is clearly further encroachment of Government upon private enterprise. I have written to you because I have faith that you are one who feels that, except for certain supervisory functions, Government has no place in business.

Yours truly,

J. M. HANLEY, *Mayor of Baker.*

SNAKE RIVER FREE ENTERPRISE ASSOCIATION,
Baker, Oreg., February 29, 1952.

Hon. GUY CORDON,
United States Senator from Oregon,
Washington, D. C.

Hon. WAYNE MORSE,
United States Senator from Oregon,
Washington, D. C.

Hon. LOWELL STOCKMAN,
United States Representative from Oregon,
Washington, D. C.

GENTLEMEN: It is our understanding that the Bonneville Power Administration has requested congressional authorization of funds with which to commence construction of a transmission line from LaGrande to Baker, Oreg., the request for the fiscal year 1953 being for $1,173,000, and the ultimate cost of the line being estimated at $2,250,000.

Unless Congress and the people wholly abandon certain basic concepts of the place and function of government insofar as business is concerned, it is necessary to inquire as to the reason behind the request for funds with which to build the transmission line.

Proponents of the Federal transmission line use as a reason such alleged circumstance as fits their needs from time to time, regardless of consistency. We understand that support is urged for the Federal line at this time as a necessary intertie with Idaho Power Co. so that private utility surpluses will be available in the power pool. Heretofore, the argument has been that the so-called power shortage area of eastern Oregon would benefit by receiving an abundance of Federal power, when in truth and in fact, there has been no power shortage in this area.

We believe the true reason for the request for an extension of the transmission line has not yet been brought into the open. To us it appears to us that the real reason is to facilitate and agitate for the creation of more PUD's. We cannot overlook that proponents of Federal power development do not wish to stop with production alone, but wish to include transmission and distribution, primarily through PUD's.

Baker County wants no PUD's. In the first PUD election held here on May 27, 1941, the people voted 2,393 against and 808 for the creation of a PUD. The next time it was voted upon, on November 5, 1946, the results were 2,216 against and 769 for the creation of a PUD. No elections have been held in Baker County on that issue since that time, but there is no reason to believe that sentiment has changed.

Harney County on November 5, 1946, defeated PUD 433 to 183. Malheur County held an election May 17, 1946, and the PUD lost, 1,071 to 2,571; on November 5 of the same year, another PUD election was held in Malheur County and the proponents lost 979 to 2,552. We are not aware of any elections held in Grant County on this issue, but here at least is a summary of what the people actually think, not what some people think other people think. Here is an expression which embodies the only sure means by which the true beliefs of the people may be expressed, namely through an election.

It is safe to say therefore, that neither Baker, Malheur nor Harney Counties desire any PUD's. That being the undoubted reason behind the request for extension of transmission lines, it would naturally follow that the people in those indicated areas, if given an opportunity to vote on the issue, would turn down the request.

Added to the foregoing observations would be the considered opinion of an ever-increasing number of people that Federal expenditure must be curtailed, and future expenditures limited only to those matters best promoting immediate national defense. At critical times such as these, defenders of individual enterprise should not have to be called upon to resist appropriations designed to further political belief and economic philosophy.

Very truly yours,

SNAKE RIVER FREE ENTERPRISE ASSOCIATION,
By DAVID C. SILVEN, *President.*

BAKER COUNTY CHAMBER OF COMMERCE,
Baker, Oreg., March 11, 1952.

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: At a regular meeting of the Baker County Chamber of Commerce last night, the bord of directors unanimously passed the following resolution:

"The board of directors of the Baker County Chamber of Commerce are informed in the press that there is pending before the Appropriations Committee in the United States Senate an application of the Bonneville Power Administration for money with which to build a 230,000-volt line from La Grande to Baker, Oreg., and that the line when completed will cost $2,225,000.

"Within the past several months the chamber of commerce was urged to sponsor the formation of a committee to gather every scrap of metal in this county so as to keep the steel mills in operation and to save this country from suffering a shortage of the metals necessary to carry on the preparedness program and to avoid sharp restrictions in the civilian economy.

"A local business which is engaged in the manufacture and sale of cattle branding and dehorning chutes has been forced to curtail its activities because of the shortage of steel. There is a great demand for these chutes throughout the nine Western States by the various livestock operators for it has been demonstrated that with one of these chutes two men can do the work of six. Other local industries are also suffering from a shortage in metals.

"We are informed that a total of well over a million pounds of critical metals will be used in the construction of said transmission line.

"We also learn in the press that Bonneville's reason for asking for this line is in order to secure the excess power generated by Idaho Power Co., but we are advised that any excess power generated by the Idaho Power Co., the Utah Power, and the Montana Power Co. is already being delivered to the Northwest through other lines connected with the Bonneville Power lines in northern Washington.

"We also learn in the press that the deficit for the present fiscal year is now estimated to be $11 billion. People are complaining bitterly about high taxes.

"Under the circumstances we feel that it is contrary to the public interest to expend this amount of money and critical materials for the construction of a power line that cannot be said to be critically necessary. The Government agencies should be the first ones to make sharp cuts in expending money and critical materials and must limit such expenditures to projects absolutely necessary.

"The board of directors of the Baker County Chamber of Commerce is opposed to the building of said transmission line at this time, and does hereby urge our representatives in Congress to oppose it. The Secretary is hereby ordered and directed to forward a copy of this resolution to each member of the Oregon delegation in Congress."

Fourteen of the fifteen directors were in attendance and the unavoidably absent director (Philo Anderson) advised today that he had written you, March 8, expressing his opposition to the Bonneville Power Administration's transmission-line proposal.

The board of directors also unanimously passed a motion authorizing Mr. Blaine Hallock to represent the Baker County Chamber of Commerce before the Senate Subcommittee on Interior Appropriations. We are respectfully asking that you arrange for Mr. Hallock's appearance before your committee and advise us as to the time and place. Further that our resolution be placed in the record at the hearings before the Senate committee.

We greatly appreciate all the cooperation given us, by you and your office, in the past and are hopeful that our present effort receives the support of the Senate Appropriations Committee.

Yours very truly,

BAKER COUNTY CHAMBER OF COMMERCE,
HERBERT CHANDLER, *President.*

BAKER JUNIOR CHAMBER OF COMMERCE,
Baker, Oreg., February 28, 1952.

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: Recently I was elected president of the Baker County Junior Chamber of Commerce. As head of this group, I feel that you should be informed as to the thinking of the young men of our community in matters of efficiency and economy in our National Government.

The junior chamber, on the local, State and National level, has vigorously supported legislative reforms aimed at reducing the costs of government through more efficient operations and the elimination of unnecessary operations. Our action has been motivated by the undeniable fact that improvements can be made and must be made so that the Federal Treasury will some day be on a sound financial basis. We, the young men, also realize fully that the cost of government rests heavily on our shoulders.

It is with the above thoughts in mind that we ask you to oppose the Bonneville Power Administration's request for over two and one-quarter million dollars to construct an electric transmission line between Baker and La Grande, Oreg.

This line, as planned, would duplicate existing facilities, which are more than adequate for the needs of our area, and would serve no customers or tie with any system in this area.

If and when more transmission capacity is needed, the private utilities have fully demonstrated their ability to secure the money and do the job.

Yours very truly,

ROBERT G. HANSON,
President, Junior Chamber of Commerce.

BAKER, OREG., *February 25, 1952.*

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: I, as president of Lumber and Sawmill Workers Union No. 2593, Baker, ask that you protest the request of Bonneville Power Administration for money to construct a power line from La Grande to Baker, Oreg.

I am certain, Senator Cordon, you have seen the many statements made by various bodies of organized labor, all pointed toward slowing or stopping the expansion of public power by Federal agencies.

This trend away from free enterprise has to be stopped, because we of labor see in it the loss of many rights we now have. For this reason I feel it absolutely necessary to protest a continuation of Federal power lines in eastern Oregon. Also unless some firm action is taken now and held to we will see complete destruction of our local utilities, as has happened in other areas.

Labor organizations such as ours have a part in free enterprise and feel the need for its preservation. Certainly a Federal or State dominated power supply is a step in the wrong direction. We need less government in business—not more.

Will you let me know what further I can do to help stop this wasteful use of tax money, and how you feel about the particular line from La Grande to Baker, as well as the over-all public power plans.

Yours truly,

O. W. DEPEE.

OREGON MOTOR CLUB,
Baker, Oreg., March 4, 1952.

Hon. GUY CORDON,
United States Senator for Oregon,
Washington, D. C.

DEAR SIR: I read in the Oregonian day before yesterday that Mr. Raver, of the Bonneville Power Administration, wants to build a power line from La Grande to Baker in order to connect with power companies that lie to the south and east of this particular section.

I have about as much faith in what Mr. Raver says as I have in most of the other bureaucrats who are now operating our Government bureaus. I am absolutely of the opinion that the only reason that Mr. Raver wants to spend over $2¼ million

in order to build a power line from La Grande to Baker is to try and force public ownership down the throats of the people of Baker County and twice, the money that we have paid for taxes has been used by the Bonneville Power Administration, to put over a vote in Baker County forcing us to come under PUD and we have turned it down by a vote of 3 to 1 each time. I do not believe that there is a single customer from La Grande to Baker and the only excuse that Mr. Raver could dig up for building this line and forcing public ownership, more of their rank socialism on us, is the fact that he dug up this excuse and thinks that he can put it over. I do not see how any red blooded American can stand for the socialistic program that these fellows are putting over and they always have it hidden behind some smoke screen. I do not find that they ever tell the whole truth, but they come through with all kinds of schemes in order to socialize this Government and I sincerely hope that the time has come when we are going to stand up and say to these fellows that we want no more of their socialistic ideas and we want them to tell the truth because they have certainly not done so in this case. This morning I went over to the California Pacific Co., and I ask them if this line was necessary to be built to Baker and they informed me that whenever it was necessary for a line to be built into Baker that the Cal-Pac would gladly build it and we would then have the power line stay in private hands instead of being in the hands of the Socialists in Washington.

I am absolutely of the opinion that the only reason that Mr. Raver wants this power line built is so that he can get all the power in Oregon, Idaho, Utah, and Montana under his thumb so that he can really control it and you know as well as I do that if he gets that much power under his control that we are certainly lost in this particular section of the country. I sincerely hope that you will bear with me in this lengthy letter but this is exactly the way most of the people in this section of the country feel when he is trying to force public ownership down our throats. Let's stop every socialistic move that comes up in Congress this year.

Very truly yours,

OREGON MOTOR CLUB,
R. C. FRISBIE, *President.*

HEILNER, GRANT & FUCHS,
Baker, Oreg., February 23, 1952.

Re La Grande-Baker 230-kilovolt transmission line.

Hon. GUY CORDON,
United States Senate, Washington, D. C.

DEAR GUY: I am writing you to register my protest against the building of the above line for the following reasons:

This morning it was announced over the radio that a cut-back of 400,000 building projects has been ordered on account of the scarcity of critical materials.

There has been a concentrated drive in this county for the past several months urging everyone to gather in all types of scrap metal in order that the steel mills might continue to operate and a further cut-back in building restrictions be avoided. We have been given to understand that the condition which confronts this country is extremely critical because of our inability to produce the materials necessary in building up the Armed Forces and taking care of the vitally necessary civilian needs.

We now learn that the Bonneville Power Administration is urging upon Congress authorization to build a 230-kilovolt transmission line from La Grande to Baker, Oreg., at a total cost of $2,500,000. I have secured from a reliable electrical engineer a statement showing the amount of materials that will be needed in the construction of this line. This tabulation is as follows:

	Pounds
Steel core for aluminum conductors	260, 537
½-inch steel strand for ground and guy wires	268, 094
Bolts, anchors, suspension clamps, etc	15, 480
Total steel	544, 111
Aluminum	574, 519
Grand total	1, 118, 630

Everyone has been requested to delay any construction or improvements not critically necessary, in fact, the regulations prohibit such building. There are

still many people in this community who would like to build a home. Three hundred new homes could be built if the steel to be used in this line was available.

The people are being urged to buy Government bonds rather than to spend money on anything that is not absolutely essential.

There is no demand here for more power. We have never had a power shortage in this area. I cannot understand how any Government agency can justify expending so much Government money and such a large amount of these critical materials in the building of a power line that is not needed, at least at this time.

Very truly yours,

A. S. GRANT.

EASTERN OREGON FEDERAL SAVINGS AND
LOAN ASSOCIATION OF BAKER,
Baker, Oreg., February 6, 1952.

Senator GUY CORDON,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: According to the stories which reach me, the public-power people are in a sad state of confusion. There is under construction a heavy power line from Pendleton to La Grande, supposedly for the purpose of bringing power into eastern Oregon, which according to the stories is in desperate need of additional electrical energy.

At the same time there seems to be a proposal afoot to build a heavy power line from La Grande to Baker to connect with the Idaho Power Co. lines and this line is to be used to bring power out of this area which a few minutes ago was supposed to be very power hungry and transmit the power to the west coast.

These reasons do not seem to coincide and in view of the contraditions involved would it not be better to use the money instead for something more necessary and important in our national economy? I think so.

Kindest personal regards.

L. V. W. HAMMOND.

OREGON LUMBER CO.,
Baker, Oreg., February 19, 1952.

Hon. GUY CORDON,
United States Senator from Oregon,
Washington, D. C.

DEAR SENATOR CORDON: A lot of us worry about the reckless Federal spending that has been going on the past several years and the huge debt that keeps piling up, but very few do anything about it. It's nice to have plenty of money to spend wastefully without thinking much about who's supplying it or whether or not there is such a thing as an end to it. It's a habit that's hard to break, individually, and much harder when it involves a large group of individuals and even some of our representatives in Washington.

Somehow the Eightieth Congress gained a reputation for being economy-minded, but that was early in the session. It was undeserved, as everyone was aware long before the budget was finally approved. Now the Eighty-second Congress faces what is perhaps too big a task to cull out a lot of unnecessary appropriations from the current biggest, and most dangerous, budget ever to be submitted.

It seems impossible to convince many men in public office that this great country with its tremendous resources could ever go broke, but all they need to do is to give a little thought to all the money we are pouring out to other and once prosperous countries to keep them in spending money, to know what a false premise that is.

The current budget needs paring to the quick, and there must be an honest and realistic approach to the problem. It cannot be accomplished by horse trading or holding out against appropriations for the other fellow's district, while at the same time fighting like hell for all the pork-barrel expenditures lined up for the benefit of his constituents.

One of the things that could be eliminated entirely is every proposal for capital expenditures for new transmission lines and new hydroelectric power plants. This is particularly true where private enterprise and private capital are anxious, willing, and able to do the job, but are most effectively being obstructed from doing so by the Chapman-Raver combination of monopolists. It's high time more of us do more to hobble the greedy, monopolistic connivances of the public

power enthusiasts and less to hinder the investment of taxpaying, private funds. As one of the largest power consumers in this area, I am unalterably opposed to these Government schemes.

I noted in the Portland papers last week that Dr. Raver appeared before the House Appropriations Subcommittee, crying for millions to build more transmission lines, not a few of which are obviously designed more to promote the furtherance of public power distribution and to hamper and discredit private power companies than to meet the immediate needs of the public or the requirements of industry.

There is no present or foreseeable power shortage in this area, yet the Bonneville Power Administration is asking for $2,250,000 to extend a transmission line now being constructed between McNary and La Grande, on to Baker, to eventually carry power where it is not needed, from the unfinished McNary power plant. That's one useless item that can and should be sliced from this high spending, election inspired budget.

Due to expanded power needs in both residential and industrial use at our Bates operation, the power company is extending a transmission line to use from Prairie City.

I realize fully I haven't told you anything new, and that your admirable record is ample proof that you will agree with my thinking on these matters, but maybe you will be glad to know my thoughts and feelings on them, and to know further that I wish we had more Senators on the job of your character, caliber, and sound thinking.

With kindest personal regards,

Respectfully yours,

L. J. ROEDEL,
Vice President and General Manager.

P. S.—I've been at home for the past several days with the "flu," which explains how I happened to dream up such a long letter.

L. J. R.

MOUNT EMILY LUMBER CO.,
La Grande, Oreg., March 4, 1952.

Hon GUY CORDON,
U. S. Senator from Oregon, Senate Office Building, Washington, D. C.

DEAR SENATOR: The Portland papers Saturday carried an Associated Press dispatch which seemed to us to only give the Department of the Interior's ideas regarding the proposed new transmission line between La Grande and Baker, Oreg. The article was made to appear that the only opposition emanated from the Utah and Idaho power companies.

We have supplied the power company with our surplus capacity for a number of years. Recent improvements in our generating units now permit us to sell regularly 1,000 kilowatts of capacity, and in cases of emergency up to 2,000 kilowatts.

This generating capacity is all available from the surplus fuel obtained from our sawmill, planer, and factory operations and represents an important factor in our own economy, also in the economy of the increased employees we sustain in our community as a result of this expansion.

We do not believe that the proposed line is needed, and the ultimate result will be an adverse effect upon the economy of our operation. The local power company has always supplied this area adequately, and has never had any difficulty in financing expansion of its service area. Most important, we believe, is that the power company has offered, and we know they are able to do so, to build any needed transmission lines, and place them on the tax rolls in the counties in which they operate.

We would greatly appreciate your valuable assistance in stopping this destructive threat to private enterprise and the adverse effect on the economy of our community.

With kindest regards.

Yours very truly,

MOUNT EMILY LUMBER CO.
FRED E. LANZER, *Secretary-Treasurer and Sales Manager.*

EASTERN OREGON LUMBER MILL,
Baker, Oreg., February 29, 1952.

HON. GUY CORDON,
United States Senator from Oregon,
Washington, D. C.

DEAR SENATOR CORDON: The undersigned constituent has admired the manner you have been master of your convictions and have gone ahead and opposed administrative policies that you know will eventually cripple our American economy. We back home also appreciate the stand you take against our administration's un-American ways. So many of our Congressmen and leaders of this administration have allowed political pressures to dictate their actions and in many cases morality has been superseded by political consequences.

This socialistic trend our administration is following has been brought about by the politicians appealing to the votes of the masses thus perpetuating themselves in office. Such a merry-go-round is naturally calling for continual Government spending and consequently demanding more, more, and more taxes with no end to deficit spending or the vicious circle created. We wonder what will happen when the incentive of the taxpayer is killed and the politicians have to seek other sources of power to keep the merry-go-round turning. Our economy will undoubtedly be stifled and ultimate disaster will be the answer.

Our Government encroachment into private enterprise is nothing but a false economy creating jobs for more and more bureaucrats who do not have the intestinal fortitude to venture on their own. For example, right in our own back yard our Government is slowly trying to expand its transmission facilities, thus crippling an already established small private power company. To justify this program, the Bonneville people claim an eminent power shortage exists in our area. As one of the larger power consumers in our community, we beg to differ. Even though we are a small sawmill operation, we have developed from a zero kilowatt to several thousand kilowatts per month. And we assure you, our power needs have been amply met with promptness and effectiveness. The writer is personally not a friend of the local power people, but a supporter of free enterprise. Kindly excuse example sighted but same substantiates the point. We beg of you to use all the influence at your command to check Government infringement on rights of free enterprise and wasteful era of deficit spending that such a condition is creating.

The undersigned does not feel that the Senator from Oregon sympathizes with this destructive program our administration is perpetrating. But he is merely writing this letter to let you know that you have many supporters who accept your good work as a matter of fact and do not take the time to write letters of commendation which you so justly deserve.

Yours sincerely,

GUS PAPANIKOLAS.

PHILO H. ANDERSON,
Baker, Oreg., March 8, 1952.

HON. GUY CORDON,
United States Senator, Washington, D. C.

MY DEAR SENATOR CORDON: It is respectfully requested that you use all of the power and influence at your command to stop further construction of the Bonneville Power Administration's transmission lines, or any other Government-owned power line, into areas already adequately served by utilities owned by private citizens and corporate stockholders.

This letter is to specifically request your help in preventing the construction of the transmission line from La Grande to Baker, Oreg.

The Government has a line from Pendleton to La Grande. La Grande is more than adequately served by the California-Pacific Utilities Co. The Government has wasted taxpayers' money to build that line into La Grande, where it is entirely unnecessary. A line into Baker is more unnecessary than the one into La Grande. We have more electric power available in Baker County than can be used at present and we believe that we will always have sufficient electric power if the privately owned utilities are allowed to serve us. In our reading about power shortage areas we generally can observe that the shortage occurs where the Government has driven the private electric industry out of the area.

We also observe that the electric power cost is a very small portion of the overall expense of conducting most industries. The biggest item of expense in con-

ducting most businesses is Federal Government taxes, whether the business be large or small.

The undersigned is an engineer and could fill this letter with figures and statistics to support his opinions. These figures are omitted because he believes you already have such information.

We are at war and the Government prevents us from necessary building because it is alleged, the critical materials are needed for our war effort. It has been rumored that our local building of South Baker school may be prevented on account of shortage of material. Concurrently the Government, while causing the citizens to search the county for scrap, proposes to use critical material to build a transmission line that is, to say the least, unnecessary. A line that the California-Pacific Utilities Co. is willing and able to build, when and if needed, at no expense to the taxpayer.

The Government income tax return now before the undersigned has made him sick at his stomach and the inclosed item, copied from the Rupert Idaho newspaper, indicates that our huge cancerous Government has thrust its tax roots into all but the last remaining vitals of its victims.

Your help in the fight to stop this socialist effort to destroy our system of private enterprise is requested.

Respectfully,

PHILO H. ANDERSON.

[Rupert News, March 8, 1952]

WHO WILL PAY TAX INCREASES?

Cold statistics on income and taxes are playing an important part in dissuading Congress from imposing any further Federal tax increases on the American people this year. If additional taxes are imposed, it will be the middle and lower income earners who will pay. Here's why, as outlined by figures compiled by the Council of State Chambers of Commerce:

"If the Federal Government were to confiscate all taxable income earned by individuals in excess of $100,000 a year, it would yield a total of only $34 million—enough to run the Government for only 3.5 hours of a single day.

"If the Government were to confiscate all taxable income earned by individuals in excess of $26,000 a year, the increase would be only $637 million. This would finance 3 days of Federal operations under the $85.4 billion budget.

"If the Government were to confiscate all taxable income earned by individuals in excess of $10,000 a year, the additional revenue would amount to 3.1 billion—enough to run the Government for 2 weeks.

"If Uncle Sam were to confiscate all taxable income by individuals in excess of $6,000 a year, the increase would be a little less than $6 billion. That would pay for about half of the $10.5 billion which will be spent for foreign aid alone in 1953."

That should make it clear that if there is to be substantial tax increases, it will be the 42.5 million persons reporting incomes of less than $10,000 a year who will pay the bill.

TIMMS MACHINE SHOP,
Baker, Oreg., February 18, 1952.

HON. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: I have gone along with many of the policies of our National Government. Some of these policies have affected me and my business—some good and some bad. But I am sure you know I would really object if some subdivision of the Government came to Baker and set themselves up in the foundry and machine shop business, especially if my shop was doing a good job and serving the people economically and well.

As a native citizen of Baker and Baker County, I want to protest the new budget appropriation to the Bonneville people to construct any more transmission lines into our area. The local power company has been investing large sums of money in new and larger equipment, and all during the years has served the people here with all the power they have ever needed. They have always kept their promises and seem to get along well with the people and businesses. I would like to keep it that way. Therefore, I ask you to do what you can to keep this country so that we can go into business and operate that business without having to compete with our own Government.

Yours very truly,

CARL A. TIMMS.

LA GRANDE, OREG., *February 4, 1952.*

Hon. GUY C. CORDON,
Senator from Oregon, Senate Office Building,
Washington, D. C.

DEAR SENATOR: Recent reports of the President's budget indicate a substantial amount for transmission lines in eastern Oregon. The Bonneville people are now building a line to La Grande which in my opinion is unjustified from an expense angle.

I urge that you stop further needless spending of taxpayer's dollars in opposing requests for appropriations for any additional lines in Oregon. With specific reference to the proposed La Grande-Baker line, both Union and Baker Counties now are adequately served by two utility companies, Idaho Power Co. and California-Pacific Utilities Co.

Yours truly,

ASBJORN B. OLSON.

HAINES COMMERCIAL CO.,
Haines, Oreg., February 4, 1952.

Hon. Senator GUY CORDON,
Senate Office Building, Washington, D. C.

DEAR SENATOR: I understand that among other things that the budget contains a request for money to build a power line from La Grande to Baker, Oreg. After having paid for P. U. D. for several years and not getting any power, and having been served by local power and I personally know that the proposed line is absolutely unnecessary, it seems to me that it is time to stop the unnecessary extravagance.

I am now told that Idaho is now delivering all surplus power to the Northwest by another grid, and no additional power can be had by the new route. It would appear that the Bonneville Administration desires to subsidize another electric service, and believe it is time that the spending of any moneys for any item other than something absolutely essential for the immediate need of the Nation be stopped.

The writer has appreciated your interest in all above such matters and am only writing to express my personal views, but know that many taxpayers are becoming alarmed at the conditions now existing.

Thanking you, and with kindest regards, I am,

Very truly yours,

GLENN DUNCAN.

BAKER, OREG., *February 4, 1952.*

Hon. GUY CORDON,
United States Senator from Oregon,
Senate Office Building, Washington, D. C.

DEAR SENATOR CORDON: I'm told that Congress is considering a Bonneville power line to Baker. I suppose this line will subject Baker County to the brownouts suffered by the coast area every year or two. It occurs to me that several years ago the Bonneville Administration threatened to cut off the power in the city of Portland in order to provide capacity for some more desirable user. However, very strong opposition from the people of Portland prompted the Administrator to continue the service.

We, in Baker County, represent a relatively small group of people, so we would expect little consideration from the Bonneville Administration in the event of a State-wide power shortage.

As our present and future power needs are being provided I believe a power line designed to either export or import power would not serve our best interests and would be a waste of taxpayers' money. Your opposition to the construction of this unnecessary power line will be appreciated by the people of Baker County.

Yours very truly,

H. O. WISWELL.

CALIFORNIA INTERTIE

Senator CORDON. Mr. Chairman, if we have just a few minutes longer, I am interested in this. Another leg of the Hanford protection plan was the California intertie, was it not, Doctor?

Mr. RAVER. Yes, sir. We had a package with three parts in it. The California tie was the second part, and that has the same basic approach engineeringwise as the Baker tie. The California tie would use excess steam capacity in California at the times when we have to hold our reservoirs to help us firm up our Northwest power supply. That would help the Hanford situation as well as the rest of the region.

The third part of the package was the longer range provision of additional generating capacity at or near the Hanford project so that they would not be dependent entirely upon the transmission of power, but would have power near their project.

That, of course, as you know, was recommended as the beginning of the Ice Harbor project of the Army engineers as an alternative solution for the supply picture there.

Now, you pointed out that there may be another alternative. I do not want to be in the position of saying that this is the only thing that can be done.

Senator CORDON. I would hope that you would not because I think we ought to study all of them.

Mr. RAVER. This plan which seemed to be a good engineering, a sound engineering, and an economical plan, came up, and that is what we have proposed.

Now, you can isolate generators from McNary Dam, for example, when it comes in in 1953, and then direct a certain amount of power in that area.

You would have to isolate them to get the power to flow there. I think we must face realistically the fact that that is an alternative solution at the expense of the rest of the region which is critically short of power supply and which is hoping to have those generators from McNary for the normal regional uses, particularly in the Portland area.

We have not recommended that, and I do not want to be in the position of recommending here that something be done at the expense of the economy of the rest of the region.

Senator CORDON. If Hanford is as important as certain people think it is, it would not make any difference what the region might have to suffer. If the determination is that so much power has to go to Hanford, then so much power has to go to Hanford if I have to be without lights.

For that reason, it seems to me that every alternative ought to be explored and presented because in the last analysis it is not what you like that is going to serve Hanford, but it is rather what we can get.

Mr. RAVER. I agree with that, and I want to make it clear to the committee that I am merely presenting the facts, that I am carrying out my duty of presenting the facts as we see them. Naturally we will abide by what the Congress decides about them.

JUSTIFICATION

Senator CORDON. Do you have an over-all statement with respect to the $70,286,400 that could go into the record?

Mr. RAVER. I do not have one prepared, but I will put one in. It is in the House record.

Senator CORDON. I believe, Mr. Chairman, we had better have it here. I would like to say that I am sure that there will not be any action taken before this committee goes a little deeper into this.

Senator HAYDEN. Then the justification should be in the record.

Senator CORDON. I do not think we should be caught without a complete statement in the record for those who are interested enough to look at it.

Mr. RAVER. I will look over the House statement, if that will be all right with you. I think the House statement covers what you want, and I will just put that in your record here plus such additional information as the committee may desire.

Senator CORDON. Yes. I think our record ought to have it here.

Mr. RAVER. Yes.

(The statement referred to follows:)

JUSTIFICATION STATEMENT FOR FISCAL YEAR 1953 PROGRAM, BONNEVILLE POWER ADMINISTRATION

The House of Representatives has reduced the 1953 estimate of the Bonneville Power Administration for "Construction" from $70,286,400, including amendments, to $66,523,400, for a cut of $3,763,000.

The House voted $6,600,000 for "Operations and maintenance," the full amount requested.

We are accepting the $1,690,000 reduction on estimates by the House which was not applied to specific items, because it now appears possible to achieve this saving in the 1953 program due to several changes in construction schedules and engineering plans.

We are not appealing $900,000 originally asked in connection with the California tie as that intertie is to be studied by all affected utilities by direction of the Secretary.

The Administration is appealing $1,173,000 for the La Grande-Baker interconnection facilities because of the importance of these facilities to the reliability of power supply in the States of Oregon and Washington. Several utilities testified before the House committee, disputing the Administration's La Grande-Baker proposal. We have not had an opportunity before now to reply to these presentations, which we believe can be adequately and effectively disproved.

The action taken by the House and restoration proposed is summarized below:

	Budget estimate 1953	House bill 1953	Restoration requested	Total amount requested 1953
Construction	$70,286,400	$66,523,400	$1,173,000	$67,696,400
Operation and maintenance	6,600,000	6,600,000		6,600,000
Total	76,886,400	73,123,400	1,173,000	74,296,400

GENERATION AND LOADS

The January peaking capability of Bonneville and Grand Coulee generators is now rated at 2,483,000 kilowatts, although on December 31, 1951, these generators were overloaded to carry a short-time peak load of 2,784,000 kilowatts. By January 1956 additional peaking capacity totaling 1,554,000 kilowatts will have been provided under present approved schedules. The Administration's construction program for fiscal year 1953 is based upon delivery of this power from new sources of generation to be installed between now and January 1956. Table I,

submitted to the committee with this statement shows new Federal hydrogeneration scheduled for this period. Present system capabilities and the annual increases in power supply from the Federal projects included in the table are:

	Thousands of kilowatts	
	January peak	Prime power
Present system	2,483	1,467
Additions by fiscal years:		
1953	123	193
1954	406	351
1955	481	511
1956	544	303
Total additions	1,554	1,358
Total system, 1956	4,037	2,825

TABLE I.—*Additions to the existing Federal system by 1955–56 defense program U [1] hydro projects*

Project	Initial date in service	Thousands of kilowatts: Installed capability, January 1956 [2]	January peaking capability	At site prime power [3]	Downstream benefit from new storage [4]
Albeni Falls [5]	August 1952	43	21	27	90
Hungry Horse	September 1952	285	235	197	234
Detroit	June 1953	100	86	30	.....
Big Cliff	October 1953	18	21	10	.....
McNary	December 1953	700	805	478	.....
Lookout Point (meridian)	July 1954	115	22	21	.....
Dexter	December 1954	15	16	12	.....
Chief Joseph	December 1955	256	294	166	.....
Subtotal	.....	1,532	1,500	941	324
Increase due to system integration	.....	.....	54	93	.....
Total	.....	1,532	1,554	1,034	324

[1] Excluding Bureau of Reclamation projects in the Upper Snake and Roza and Chandler Dam projects
[2] Name-plate rating.
[3] Prime power is average over storage draw-down season.
[4] Storage benefit from the Hungry Horse and Albeni Falls projects, is effective over the 1955–56 storage draw-down season at downstream plants as follows:

Grand Coulee	223
McNary	58
Bonneville	43
Total	324

[5] Usable storage of 1,140,000 acre-feet is available in August of 1952. Units are scheduled for initial operation August 1954.

Since my last appearance before this committee it has been possible to accelerate the schedules for the installation of generators at McNary and Chief Joseph Dams. The Congress has also appropriated funds to start construction of The Dalles Dam. These steps improve the power-supply outlook of the region appreciably. In view of the fact that it ordinarily takes a minimum of 4 or 5 years to complete a major multipurpose hydroelectric project after it is authorized and funds are appropriated, it does not appear possible to advance appreciably present schedules for dams under construction without incurring considerable increased costs. It is extremely important, however, that appropriations be made for Ice Harbor Dam and that Hells Canyon Dam be authorized and funds provided for initiating construction in order that the schedule for installation of new

generating facilities may be met and that the region's power supply be augmented to meet load requirements.

Power has been in short supply in the Pacific Northwest during the past few years and will continue to be short for at least the next 5 years. Power-load growth from the rapidly expanding population and industrial development in the region has outstripped new power generation. During the past year, for example, average electrical-energy requirements increased by nearly 400,000 kilowatts, while available firm-energy resources increased by only half that amount, or approximately 200,000 kilowatts, on top of an already existing power shortage in the region. If critical water had occurred during the current season, as it did in 1936–37, the region would have had to curtail approximately 600,000 kilowatts, or 20 percent of the total regional energy load, for a period of about 6 months. If these adverse hydro conditions had occurred, the region would have been confronted with a catastrophe and the national defense production program would have been greatly damaged. Fortunately water conditions on the Columbia River have been above average with the exception of a short period in September 1951, and total regional hydro-energy supplies, including the watersheds other than the Columbia, have been generally above average. As a result, it was necessary to shut down industrial loads after full use of both hydro- and steam-energy resources for only a short period in September 1951 in an average amount of approximately 92,000 kilowatts for 12 days. However, the Bonneville Power Administration's hydropower was curtailed over 240,000 kilowatts in September and also in November, December, January, and February, but utilization of higher-cost steam-energy supplies in the region enabled the interruptible industrial loads, largely aluminum production, to operate at full capacity, except for the amount indicated for the short period in September.

Next year, 1952–53, the region will be short in power supply a similar amount of approximately 600,000 average kilowatts under critical water conditions and industrial loads essential to the national defense program again will be subject to the risk of interruption. Thus, the dependence of Pacific Northwest industry on nondependable, interruptible power is very large and will continue to be large for the next several years. The production from these loads is an important factor in the national defense program. During the past year over 10 percent of the Nation's aluminum came from the utilization of this nondependable interruptible power in the Northwest.

The power situation will improve somewhat in 1953 when power from the McNary project becomes available, but the region will still be short over 500,000 kilowatts under critical water conditions in 1953–54 and about 350,000 kilowatts in 1954–55, based upon definitely scheduled resources and without giving effect to any unusual industrial expansion such as might occur at the Hanford Works of the Atomic Energy Commission. Some additional improvement will occur in 1955 when Chief Joseph Dam begins production, but a shortage of approximately 300,000 average kilowatts could still occur in the 1955–56 critical season without giving effect to any unusual load growth. It is possible that certain non-Federal projects for which licenses have been issued by the Federal Power Commission could reduce this shortage, but the construction and scheduling of these projects are still highly uncertain and even with those projects in production there would still be a deficit in 1955–56 of over 100,000 average kilowatts.

In 1956–57, which is the year that Ice Harbor Dam would come into production, the region is still faced with a deficiency of over 200,000 average kilowatts without Ice Harbor Dam generation and without taking into account any major new industrial expansion. This shortage might be reduced somewhat by the non-Federal projects which have been licensed but for which the schedule is still quite indefinite, but even these non-Federal projects would supply less than the shortage without Ice Harbor generation and without any new major industrial expansion.

Thus, it is clear that Ice Harbor Dam generation is required in 1956–57 to help meet the regional power shortage and that the report of the Electric Power Advisory Committee to the Defense Electric Power Administration is overly optimistic in its implication that by 1956 the Pacific Northwest region will have a safe margin of surplus. That report assumes resources in the total regional power generation which are not definitely assured at this time; it assumes loads which already it is clear will be exceeded by new industrial expansion, particularly at the Hanford Works of the Atomic Energy Commission; and it assumes average or median water conditions which would leave a substantial amount of industrial production subject to possible curtailment. While we are having to resort to the use of power supplies available in an average or median water year during this current period of critical shortage not only in the Pacific Northwest but in other

regions of the country, additional firm generation should be scheduled to eliminate that risk of curtailment so that all estimated regional loads can be carried under adverse hydro conditions. It has been our experience that if power generation is scheduled to carry all known regional loads estimated as long as 4 or 5 years in advance, by the time we reach that point new industrial loads not foreseen will demand the use of power supplies available above a critical water year.

With Ice Harbor Dam in the power-generation schedule, the region's loads and resources should be in balance in a critical year by 1957–58, but without Ice Harbor Dam it could be short in power supply. Not until 1958–59, even with Ice Harbor Dam in the power-generation schedule, would we definitely be sure of providing additional firm power supplies in a critical water year for major new industrial expansion.

In this connection the report of the Electric Power Advisory Committee previously mentioned criticizes the load forecasts of the Defense Electric Power Administration, which were utilized in their analysis, as follows: "In our opinion the critical deficiency in the forecast is that they do not allow enough for increases in industrial uses of power, which though not yet definite, are almost certain to occur." All of the figures above are based on definitely scheduled loads and resources with no allowances for new industrial uses which though not yet definite, are almost certain to occur.

Power facilities must be planned and developed ahead of demand to provide industry with the power it needs. This is particularly necessary in the case of hydro-electric projects since it takes about a year to build a hydro-electric-process plant but about 4 or 5 years to build a hydro-electric plant to serve them.

ADDITIONAL NON-FEDERAL GENERATION

A number of the distributing utility systems, both public and private, have under way or planned new generation facilities. These are shown in table II submitted to the committee with this statement. These would provide 1,527,000 kilowatts peaking capability and 813,000 kilowatts prime power in 1954. However, as indicated in the table, construction is not yet under way on projects which would provide 697,000 kilowatts peaking capability and 356,000 kilowatts of prime power of the total scheduled.

TABLE II.—*Additions to non-Federal utilities scheduled by 1955–56—Hydro projects*

[Thousands of kilowatts]

Project	Initial date in service	Installed capacity, January 1956 [1]	January peaking capability	Added prime [2]
City of Seattle: Ross [3]	January 1953	270	227	70
City of Tacoma:				
Mossyrock	December 1953	300	193	92
Mayfield	October 1953	160	160	74
Chelan County public utility district: Rock Island (additions) [3]	September 1952	150	165	148
Pend Oreille public utility district: Box Canyon	June 1954	60	60	48
Washington Water Power Co.: Cabinet Gorge [3]	September 1952	200	200	95
Portland General Electric Co.:				
Station B [3]	August 1952	14	14	
Pelton	January 1954	108	108	45
Pacific Power & Light Co.: Yale [3]	December 1952	100	100	72
California-Oregon Power Co.:				
Clearwater No. 1 [3]	June 1953	15	15	6
Clearwater No. 2 [3]	do	26	26	9
Lemolo No. 1	September 1954	30	30	17
Lemolo No. 2	do	30	30	17
Idaho Power Co.:				
C. J. Strike [3]	January 1952	83	83	57
Dike	June 1954	60	60	33
Montana Power Co.: Kerr (addition)	October 1954	56	56	30
Total		1,662	1,527	813

[1] Name plate rating.
[2] Prime power is average over regional storage draw-down season.
[3] Under construction.

TABLE III.—*1953 construction program summary*

FUNDS ESTIMATED TO BE AVAILABLE IN 1953

Budget estimate for additional appropriation for construction	$67,696,400
Amendment to budget estimate (H. Doc. 370)	2,590,000
Estimated unobligated balance in 1952 to be available in 1953	
Total funds estimated to be available in 1953	70,286,400

SUMMARY TABLE

Item number and facility	Estimated cost	Obligations to June 30, 1951		Program fiscal year 1952		Program fiscal year 1953		Balance to complete
		Appropriation	Unliquidated contract authority	Appropriation [1]	Liquidation	Appropriation [1]	Liquidation	
I. GENERAL—MAJOR 230 KILOVOLTS GRID								
1. Grand Coulee-Midway No. 3	$4,497,000	$2,219,000	$1,649,000	$2,261,000	$1,649,000	$17,000		
3. Grand Coulee-Columbia No. 3	3,363,000	3,210,000	8,000	143,000	8,000	10,000		
4. Grand Coulee-Columbia No. 4	3,172,000	2,177,000	609,000	942,000	609,000	53,000		
5. Grand Coulee-Spokane No. 6	3,907,000	240,000	1,682,000	3,667,000	1,682,000			
6. Grand Coulee-Columbia-Olympia	14,306,000	246,000	3,041,000	6,447,000	1,858,000	6,163,000	$1,183,000	$1,450,000
7. Covington substation additions	631,000	352,000	25,000	116,000	25,000	147,000		16,000
8. Snohomish-Kitsap (Bremerton)	6,107,000			370,000		3,584,000		2,153,000
9. Grand Coulee-Snohomish No. 2	3,985,000	3,384,000	206,000	419,000	186,000	129,000	20,000	53,000
10. Chief Joseph-Snohomish No. 3 and No. 4	18,920,000					7,685,000		11,235,000
11. McNary-Big Eddy-Troutdale	13,172,000	648,000	2,189,000	6,486,000	1,153,000	5,696,000	1,036,000	342,000
12. McNary-Big Eddy-Ross	16,672,000			150,000		10,071,000		6,451,000
13. McNary-(Maupin)-Detroit	6,919,000	118,000		1,704,000		3,778,000		1,319,000
14. Detroit-Albany	2,633,000	65,000	572,000	1,564,000	572,000	850,000		154,000
15. McNary-Walla Walla (amendment)	(3,505,000)					(2,200,000)		(1,285,000)
16. Detroit-Chemawa	5,286,000			876,000		1,760,000		2,650,000
17. Ross-St. Johns conversion	3,676,000	245,000	1,780,000	3,034,000	1,569,000	397,000	211,000	
18. Midway-Big Eddy-Maupin-Detroit	10,261,000	6,339,000	2,522,000	3,179,000	2,522,000	360,000		383,000
19. Detroit-Alvey	5,908,000	3,123,000	1,877,000	2,351,000	1,720,000	409,000	157,000	25,000
20. Southwest Oregon loop service	13,449,000	795,000	1,683,000	4,887,000	794,000	4,837,000	889,000	2,930,000
21. Coos Bay area service	3,254,000			16,000		255,000		2,983,000
22. McNary switching station	1,904,000	7,000		386,000		891,000		620,000
23. McNary-La Grande	3,728,000	1,699,000	562,000	1,579,000	592,000	395,000		55,000
24. La Grande-Baker	2,250,000	315,000				1,173,000		762,000
25. System reactive facilities	3,553,000	592,000	358,000	1,265,000	358,000	1,512,000		184,000
Subtotal	151,553,000	25,774,000	18,763,000	41,842,000	15,267,000	50,172,000	3,496,000	33,765,000

See footnotes at end of table, p. 128.

TABLE III.—*1953 construction program summary*—Continued

SUMMARY TABLE—Continued

Item number and facility	Estimated cost	Obligations to June 30, 1951		Program fiscal year 1952		Program fiscal year 1953		Balance to complete
		Appropriation	Unliquidated contract authority	Appropriation [1]	Liquidation	Appropriation [1]	Liquidation	
IA. COASTAL AREA—PUGET SOUND								
1. Covington-Olympia	$3,638,000	$2,821,000	$518,000	$817,000	$518,000			
3. Olympia-Shelton-Port Angeles	4,235,000	4,191,000	5,000	44,000	5,000			
4. Olympia-Shelton No. 2	480,000	357,000	46,000	123,000	46,000			
5. Shelton-Kitsap-Bremerton No. 2	1,220,000	37,000	64,000	418,000		$524,000	$64,000	$241,000
6. Bellingham substation	1,852,000					810,000		1,042,000
7. Other transmission facilities	14,112,000	13,697,000	13,000	231,000	13,000	169,000		15,000
8. San Juan Islands service	888,000	865,000	5,000	23,000	5,000			
9. South Elma	186,000	10,000	100,000	176,000	100,000			
10. Quinault service	160,000	41,000				36,000		83,000
11. Tacoma tap	871,000			552,000		261,000		58,000
13. Raymond-Aberdeen	951,000	32,000	128,000	715,000	128,000	56,000		148,000
15. City of Seattle service	785,000	446,000	132,000	339,000	132,000			
Subtotal	29,378,000	22,497,000	1,011,000	3,438,000	947,000	1,856,000	64,000	1,587,000
IB. COASTAL AREA—PORTLAND-LONGVIEW-CHEHALIS AREA								
1. North Bonneville substation additions	467,000	245,000	4,000	65,000	4,000	123,000		34,000
2. Troutdale substation additions	167,000					145,000		22,000
3. Longview area service	763,000	59,000		374,000		252,000		78,000
4. Chehalis substation additions	883,000	636,000		173,000		74,000		
5. Clark County service	65,000					54,000		11,000
6. J. D. Ross substation additions	1,166,000	391,000	29,000	188,000	29,000	250,000		337,000
9. Forest Grove-McMinnville	679,000	392,000	92,000	218,000	67,000	39,000	25,000	30,000
13. Salem Boyer	343,000	10,000	127,000	312,000	123,000	21,000	4,000	
14. Westport-Cathlamet	445,000	59,000	52,000	364,000	37,000	22,000	15,000	
15. Astoria substation additions	222,000			160,000		62,000		
16. Tillamook Service	1,739,000					518,000		1,221,000
18. Other transmission facilities	2,747,000	2,013,000	53,000	469,000	53,000	222,000		43,000
Subtotal	9,686,000	3,805,000	357,000	2,323,000	313,000	1,782,000	44,000	1,776,000
IC COASTAL AREA, SOUTHWEST OREGON								
2. Eugene-Reedsport	2,048,000	1,358,000	133,000	427,000	130,000	164,000	3,000	99,000
4. City of Springfield	316,000	114,000	62,000	202,000	62,000			
5. Detroit substation	139,000	30,000	45,000	61,000	45,000	47,000		1,000
6. Toledo substation additions	136,000	6,000	74,000	118,000	74,000	12,000		
7. Other transmission facilities	434,000	64,000	29,000	158,000	29,000	164,000		48,000
9. McKinley-Gold Beach	2,209,000	818,000	176,000	947,000	176,000	248,000		196,000
10 Lebanon-Springfield	878,000			42,000		253,000		583,000
11. Middle Fork Willamette River projects	2,347,000			53,000		494,000		1,800,000
12. North Santiam Valley	368,000			177,000		183,000		8,000

11. Middle Fork Willamette River projects	2,347,000			53,000		494,000		1,800,000
12. North Santiam Valley	368,000			177,000		183,000		8,000
Subtotal	8,875,000	2,390,000	519,000	2,185,000	516,000	1,565,000	3,000	2,735,000
IIA. CENTRAL AREA—SPOKANE								
1. Spokane substation additions	3,649,000	1,197,000	1,566,000	1,828,000	1,119,000	607,000	447,000	17,000
2. Spokane–Colville–Spirit	151,000	75,000		2,000		52,000		22,000
3. Other transmission facilities	196,000	92,000	1,000	49,000	1,000	55,000		
4. Metaline Falls substation additions	64,000	35,000		29,000				
5. Four Lakes	235,000	17,000	93,000	153,000	56,000	65,000	37,000	
8. Valley Way substation additions	39,000		29,000	39,000	29,000			
Subtotal	4,334,000	1,416,000	1,689,000	2,100,000	1,205,000	779,000	484,000	39,000
IIB. CENTRAL AREA—IDAHO PANHANDLE								
1. Idaho Panhandle	1,622,000	869,000	44,000	122,000	44,000	586,000		45,000
2. Other transmission facilities	28,000			11,000		17,000		
3. Albeni Falls Loop	303,000					142,000		161,000
Subtotal	1,953,000	869,000	44,000	133,000	44,000	745,000		206,000
IIC. CENTRAL AREA, CENTRAL WASHINGTON, CENTRAL AND EASTERN OREGON								
1. Columbia substation	1,565,000	1,022,000	147,000	341,000	147,000	180,000		22,000
2. Columbia-Ellensburg	755,000	519,000	1,000	45,000	1,000	133,000		58,000
3. Franklin substation additions	848,000	163,000	186,000	642,000	186,000	41,000		2,000
4. Okanogan and Ferry Counties	1,829,000			481,000		1,004,000		344,000
6. Richland-Kennewick	516,000	224,000	2,000	116,000		144,000	2,000	32,000
7. Service to aluminum plant at Wenatchee	3,969,000	2,197,000		1,597,000		175,000		
8. Midway substation additions	3,262,000	1,119,000	510,000	1,011,000	510,000	911,000		221,000
9. Walla Walla substation additions	396,000	333,000		63,000				
10. The Dalles-Goldendale	223,000	45,000	61,000	137,000	61,000	41,000		
12. Columbia Basin service	576,000	31,000				231,000		314,000
13. Benton-Franklin	440,000	93,000	80,000	347,000	80,000			
15. Warden substation	171,000			65,000		104,000		2,000
16. Orondo substation	107,000					66,000		41,000
18. Other transmission facilities	978,000	195,000	31,000	276,000	31,000	385,000		122,000
20. Moxee switching station	281,000	25,000	6,000	212,000	6,000	44,000		
21. The Dalles Dam service	130,000					130,000		
22. Quincy substation	172,000	40,000	5,000	36,000	3,000	58,000	2,000	38,000
23. Franklin County	769,000	30,000		291,000		286,000		162,000
25. Benton City substation	92,000	51,000	8,000	41,000	8,000			
27. Tygh Valley substation	45,000	3,000		42,000				
28. Valhalla (Columbia)-Keokuk	82,000	27,000	13,000	41,000	13,000	14,000		
29. Rocky Ford-Soap Lake	384,000	139,000	50,000	140,000	50,000	55,000		50,000
31. Moses Lake	93,000			48,000		45,000		
Subtotal	17,683,000	6,256,000	1,100,000	5,972,000	1,096,000	4,047,000	4,000	1,408,000

See footnotes at end of table, p. 128.

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TABLE III.—*1953 construction program summary*—Continued

SUMMARY TABLE—Continued

Item number and facility	Estimated cost	Obligations to June 30, 1951		Program fiscal year 1952		Program fiscal year 1953		Balance to complete
		Appropriation	Unliquidated contract authority	Appropriation [1]	Liquidation	Appropriation [1]	Liquidation	
III WESTERN MONTANA								
2. Other transmission facilities	$155,000	$73,000	$2,000	$37,000	$2,000	$29,000		$16,000
3. Hungry Horse-Hot Springs	3,431,000	449,000	1,104,000	2,708,000	1,104,000	233,000		41,000
4. Hot Springs switching station	844,000	9,000		713,000		99,000		23,000
5. Hot Springs-Anaconda No. 1	7,455,000	1,224,000	2,952,000	5,478,000	2,952,000	753,000		
6. Hot Springs-Spokane No. 1	8,334,000	1,795,000	2,242,000	5,561,000	2,242,000	906,000		72,000
6a. Hot Springs-Spokane No. 1 capacitors (amendment)	(494,000)					(370,000)		(124,000)
Subtotal	20,219,000	3,550,000	6,300,000	14,497,000	6,300,000	2,020,000		152,000
IV GENERAL								
1. General structures	993,000	33,000		150,000		700,000		110,000
2. Communication facilities	2,552,000	309,000	164,000	889,000	163,000	700,000	$1,000	654,000
3. Tools and equipment	3,295,000			1,065,000		2,230,000		
4. Preliminary engineering studies	211,000	1,000		110,000		100,000		
7. Portland operations facilities	1,103,000					1,000,000		103,000
Subtotal	8,154,000	343,000	164,000	2,214,000	163,000	4,730,000	1,000	867,000
Miscellaneous unliquidated contract authority	969,000		969,000	969,000	969,000			
Proposed supplemental allowance for fiscal year 1952 to cover pay increase for annual employees	590,000			590,000				
Total	253,394,000	66,900,000	30,916,000	76,263,000	[2] 26,820,000	67,696,000	4,096,000	42,535,000
Amendments	3,999,000					2,590,000		1,409,000
Less amounts not appealed:								
California Intertie						900,000		
Reductions to be absorbed (see schedule attached)						1,690,000		
Total requested						67,696,400		

[1] Includes amounts for liquidation of prior year contract authority as shown in next column.
[2] Includes $5,820,000 carried over from previous fiscal year.

Tentative schedule, reductions to be absorbed, 1953 construction budget

Budget item No.	Facility	Appropriation	Proposed reduction
I 12l	Ross-Franklin microwave (24 channel)	$198,000	$180,000
I 17	St. Johns-Bethany project	397,000	40,000
IB 3b	Longview substation additions	99,000	80,000
IB 16	Forest Grove-Tillamook project	518,000	150,000
IC 9b	Norway substation	168,000	168,000
IC 10	Lebanon-Springfield 115-kilovolt line	253,000	210,000
IC 12	Santiam substation	183,000	130,000
IIC 4	Orient substation	64,000	50,000
IIC 4f	Sherman Creek 115-kilovolt tap line	182,000	150,000
IIC 18d	Grandview substation 12.5-kilovolt facilities	155,000	40,000
III 6	Cabinet Gorge Switching station	535,000	427,000
IV 1b	Big Eddy Maintenance Building	65,000	65,000
	Total of proposed reductions		1,690,000

TRANSMISSION REQUIREMENTS

Transmission facility requirements for 1953 are listed in table III, "1953 construction program summary."

During the past year, the Administration's transmission system was loaded to perhaps its most critical condition of history. Service generally was on a precarious basis, and only through good fortune and the exercise of utmost vigilance were major region-wide outages averted. On October 9, 1951, the high voltage transmission grid experienced some initial stages of voltage instability due to the excessive amounts of power flowing over the major circuits. As a result, voltages at the major substations on the grid dropped to approximately 75 percent of normal. This caused, for the duration of the emergency, the dropping off of certain aluminum loads and the complete shut-down of the Atomic Energy Commission's plant at Hanford. Since this disturbance Grand Coulee generation was curtailed at times to assure safer operation of the transmission lines. All transmission lines serving the fast-growing southwest Oregon area were loaded to their absolute limit of capacity.

A failure of any major transmission line during this critical load period would have had serious repercussions over the region as a whole. Accompanying this heavy loading of the transmission lines were poor voltage conditions and excessive transmission line losses. These conditions to a considerable extent have been improved by the completion in December of the 230-kilovolt circuits from Coulee to Columbia, Coulee to Midway, and Midway to the J. P. Alvey substation (Eugene). However, the relief from these facilities would appear only temporary inasmuch as it is expected that with anticipated load growth the system loadings will be almost as high in 1952 as they were in 1951. In these circumstances, system operations will continue to be attended by uneconomically excessive transmission line loadings, inadequate reserves and possible curtailments, and the threat of region-wide disturbances. It is anticipated that major relief will not be realized at least until a sizable amount of generating capacity is available at McNary Dam and the necessary transmission lines associated therewith are completed to Portland and other power deficient load centers. Following McNary, Chief Joseph Dam with its related transmission facilities should provide similar relief to the Puget Sound area. In fiscal year 1953, construction will be initiated for five major voltage transmission lines, as follows:

One circuit, McNary Dam to J. D. Ross substation (Vancouver).

Two circuits, Chief Joseph Dam to Snohomish substation (north Seattle area).

One circuit, La Grande, Oreg., to Baker, Oreg. (Idaho interconnection).

One circuit, McNary, Oreg., to Walla Walla, Wash.

The McNary-Walla Walla 230 kilovolt service is required to meet the special needs of the Pasco-Walla Walla-Pendleton area and the Atomic Energy Commission. Load growth in this area is approximately 35,000 kilowatts a year, or greater than twice the rate previously estimated.

Major new starts of 115,000 volt transmission lines in 1953 include a line from Forest Grove to serve the Tillamook County area and to meet the impending power shortage situation in that area, and the short Albeni Falls transmission line to integrate the output of that dam with the transmission grid. In addition, other local facilities will be constructed to supply the areas adjacent to the major load centers and to supply new customers or the increased requirements of existing customers.

In the face of some shortages of labor and material, the Administration's construction program is substantially on schedule. The Spokane-Hot Springs, the Hungry Horse-Hot Springs and the Hot Springs-Anaconda 230-kilovolt circuits will be completed by the late summer or early fall of 1952. Work on the 230-kilovolt circuit to Klamath Falls is proceeding according to schedule in order to meet the energization date of November 1952 at Redmond, Oreg., and December 1953 at Klamath Falls, Oreg.

Both with respect to new power sources and the system loads, the Administration more than ever faces uncertainties of a nature that make impossible the development of any fixed plans regarding the transmission system. The outcome of the presently unsettled issues relating to the non-Federal Cowlitz and Pelton projects, and the proposed legislation for Federal steam plants in the Northwest, will naturally have a far-reaching effect on the transmission grid required to serve the area. Transmission system plans may require adjustment in accordance with the decisions and developments with respect to these projects. Similarly, the Administration must be in a position to revise its program to serve any new major, but presently unallocated, defense load, or to meet any unusual load growth resulting therefrom. Congress and the Bureau of the Budget have in the past recognized the need for this flexibility in transmission planning and scheduling. Under present circumstances this need is greater than ever before.

ENGINEERING ACCOMPLISHMENTS

In keeping with perhaps the major purpose of the Bonneville Act to achieve widespread distribution of power at the lowest possible cost, the Bonneville Power Administration has constantly endeavored to promote economies in the construction, operation, and maintenance of its high-voltage grid. Particular emphasis has been placed on the development of new engineering methods, with the result that the cost of transmitting electric energy today is probably no higher, and perhaps less, than it was in 1941 despite an increase in construction costs of approximately 100 percent. Since transmission costs represent a large portion of the Bonneville Power Administration's total power costs, these engineering developments have contributed heavily to the Administration's ability to render service without increasing rates in spite of the great rise in cost levels. Without benefit of these developments, the Administration's annual requests for appropriations to carry out its construction, maintenance, and operation responsibility would be substantially higher than they are. Developments under investigation show major promise that the trend in these savings and benefits will continue.

These engineering accomplishments have not only resulted in major savings to the Bonneville Power Administration and to the Government but also in benefits to the power industry. There are set forth hereunder some of the more significant developments in which Bonneville engineers have assumed leadership, together with an evaluation of these developments expressed in annual savings or investment costs as realized by the Bonneville Power Administration. These are listed in three categories as follows:

I. Engineering developments adopted and in practice
II. Engineering developments adopted and being put in practice
III. Engineering developments under study

Estimated annual savings compared to 1941 practices

I. ENGINEERING DEVELOPMENTS ADOPTED AND IN PRACTICE

1. Light steel towers: After thorough study, the Bonneville engineers adopted the light steel tower as a basic design for its 230-kilovolt and higher voltage transmission lines. It is believed that this light design, which shows a saving of 40-50 tons of steel and $6,000 to $7,000 per mile of line, is the only one of its kind for this voltage and for areas comparable in climate and terrain to that served by the Bonneville Power Administration. For this item, $1,680,000.

2. Large transformer banks: Concurrent with some basic improvements in transformer designs by manufacturers, the Bonneville Power Administration adopted 250,000-kilovolt-ampere (forced-cooled rating) transformers as standard equipment. It is believed these are the largest transformer banks in the country today. This size compares to 100,000-kilovolt-ampere transformers in 1941 which then were considered the largest permissible at the voltage. Additional savings attributable to the use of larger transformers included lower insulation

levels, autotransformer windings, omission of untanking towers, use of rail-mounted spare units to serve a number of substations and reduction in the required number of oil circuit breakers. For this item, $3,000,000.

3. Reduced insulation levels: Early investigation by Bonneville engineers supported by laboratory tests confirmed the view that the standard practices of the industry required an excessive amount of insulation for equipment operating at 230 kilovolts or higher. This led to successful efforts to revise these standards in a manner to achieve substantial economies. This permitted a still further reduction of insulation below that considered in item 2 above and smaller bushings for circuit breakers. For this item (over and above the savings in item 2 above), $250,000.

4. Improvements in circuit-breaker characteristics: In 1941 the largest 230-kilovolt circuit breakers obtainable were rated 2,500,000 kilovolt-amperes, 3 cycle. They were not suitable for high-speed reclosing operations. Their cost then was approximately $70,000 each. It is believed that Bonneville's system was the first 230-kilovolt system ever to be used for short-circuit tests in an endeavor to improve designs and encourage competition among manufacturers. Credit is given the Bureau of Reclamation for their efforts in this connection at Grand Coulee Dam. As result of these tests it was possible by 1950 to obtain 230-kilovolt circuit breakers with a rating of 7,500,000-kilovolt-ampere, 3-cycle, and 20-cycle kilovolt-ampere reclosing characteristics, at a cost of $50,000. For this item (on a conservative basis), $260,000.

5. Selective use of overhead ground wires: By making use of the improved type breakers described in item 4, it is possible to permit lightning flashes to strike transmission line conductors which will result in the circuit interruption, but a rapid reclosing of the breakers at each end of a circuit restores the circuit to service sufficiently rapidly to retain system stability even with relatively heavy loadings. This form of operation has the advantages of permitting transmission lines to be constructed without the use of overhead ground wires, or at least to select relatively large areas where no ground wires are necessary with a consequent saving in transmission line cost. For this item, $500,000.

6. Shunt capacitors: The Bonneville Power Administration was one of the first utility agencies to adopt the use of shunt capacitors for transmission line voltage regulation. It is believed BPA is the first agency to use large blocks of these capacitors connected directly to 115,000-volt circuits. Static capacitors require one-half the investment and one-third the total annual cost of equivalent synchronous condensers. For this item (on a conservative basis), $800,000.

7. Other items in which Bonneville has taken leadership in the industry and which have resulted in major savings include the following:

A. Simplification of lightning-protection facilities in smaller substations, $120,000.

B. Selective application of vibration dampers based on investigation of actual field conditions, $150,000.

C. Utilization of potential transformers in switching station and substation to supply station service requirements, $12,000.

D. Adoption of line-type lightning arresters for use in substations replacing more expensive station-type arrestors, $50,000.

8. In addition to the foregoing, the Bonneville engineers have adopted many proven cost-saving innovations by manufacturers and other utilities with substantial benefits to the Administration:

A. Minimizing lightning flashovers on steel towers by lowering footing resistance through radial groundmat instead of continuous counterpoise.

B. Adoption of 3-phase transformers in sizes up to 20,000 kilovolt-amperes in place of three single-phase units.

C. Mass production of substation switchboards and field installation thereof.

D. Use of steel grillage foundations for 230-kilovolt angle and dead-end towers in place of reinforced concrete.

E. Utilization of most economical standard tower foundation design by visual inspection at time of excavation.

F. Redesign of substation steel racks for 69-kilovolt and lower voltages.

G. Modification of right-of-way clearing standards to limit full-scale removal to portion immediately under line—brush cover left on remainder to minimize fire- and weed-control problems.

H. Utilization of transite pipe for oil and water system instead of steel and cast iron.

I. Utilization of steel plate anchors for wood pole lines instead of channel anchors.

J. Development of new hardware design for use in 115- and 230-kilovolt wood-pole construction.

K. Reduction in number of insulators required for 230- and 115-kilovolt steel lines as result of system and laboratory tests and improvements in system operation.

L. Development of heat exchanger for use in drying out transformer windings preparatory to energization.

For these items, $800,000.

II. ENGINEERING DEVELOPMENTS ADOPTED AND BEING PUT INTO PRACTICE

1. Series capacitors: It is believed that the Bonneville Power Administration was the first agency to promote the use of series capacitors in high-voltage long-distance transmission lines and the first in America to place such an installation in service. The successful operation of this device at BPA's Chehalis substation justifies the further use of series capacitors on other major transmission lines, thereby increasing the capacity of these circuits and improving their operating characteristics. Two such additional installations will be placed in service on the system shortly, one at Rocky Ford, Wash., which will increase the capacity of the Coulee-Midway line No. 3 by 33 percent, and the second at St. Andrews, Wash., in the Coulee-Columbia No. 3 circuit, also increasing the capacity of this circuit by 33 percent. Additional similar installations are contemplated for still other circuits. For this item, $500,000.

2. Autotransformers in high-voltage transmission lines: BPA engineers have given active consideration to the possibilities of extra high voltages for transmission, but the inherent economies of 230-kilovolt, attributable largely to relatively low-cost transformers, circuit breakers, and other terminal facilities, have been strong influences against such a move. Engineering studies, however, have indicated that the economies of extra high voltage for some of the higher capacity circuits can be achieved, while still retaining substantially all of the advantages of 230-kilovolt operation by inserting appropriate autotransformers in the circuits. On this basis of operation, the switching facilities at the generating station would continue to be rated at 230,000 volts. The autotransformers in the line would increase this voltage to 287,000 volts or higher. At the receiving end of the line a similar autotransformer would step this voltage down to 230,000 volts, at which voltage power would be delivered into the system at the load centers. The use of autotransformers shows great promise of incurring major economies in the cost of power transmission on the Bonneville system. Bids are now being received for a pair of 400,000 kilovolt-ampere of autotransformer banks for the Coulee-Olympia transmission line. They are scheduled for installation December 1954. They will probably represent the first installation of their kind. It is the belief of Bonneville engineers that the use of autotransformers in combination with series capacitors, both BPA developments, in high-voltage transmission lines, will provide the basic solution to some of the Administration's major transmission problems. For this item, $3,000,000.

3. Microwave: The Bonneville Power Administration is one of the first utilities to study the possibilities of microwave as a tool for the control and operation of high-voltage power systems. It is believed that BPA is the first utility to adopt microwave as a system-wide facility. The first unit in the microwave program was placed in service in 1952 between Seattle, Wash. (Snohomish substation), and Portland, Oreg. (J. D. Ross substation). Experience to date with this new facility shows promise that it will revolutionize the techniques in communications, telemetering, supervisory control, relaying and maintenance of high-voltage power systems and other types of utility plant. It appears safe to say that the operation and maintenance of the high-voltage Federal grid in the Pacific Northwest without microwave would be cumbersome and inefficient when compared to the operation of the system with it. With microwave, communications over the entire grid will be greatly facilitated; supervisory control, whereby the operators in one station can control facilities in a number of remotely located stations, will be vastly improved; relay protection for high-voltage lines will provide major benefits and the operation of the system will be much more efficient. It is believed that the relay benefits alone will justify the entire microwave program. Because of the enormous possibilities of microwave, any evaluation of its benefits at this time would be largely speculative. A highly conservative estimate for this item would be $1,000,000.

4. Coordination of McNary generators with BPA transmission system: A joint study undertaken by the United States Army Corps of Engineers and the Bonneville Power Administration resulted in a revision by the Corps of Engineers

of the specifications for the generators and transformers at McNary powerhouse to include special characteristics best suited to the over-all operation of the Federal power system. These special characteristics permitted the elimination of one 230-kilovolt transmission line between McNary and the Portland area at a saving to the Federal Government of approximately $7 million. This study was the forerunner of similar studies applicable to other Federal power plants in the Pacific Northwest. While the benefits of this endeavor will be substantial, no claim is made herein for the annual savings other than for McNary Dam, which is estimated to be $250,000.

5. Technical developments difficult to evaluate: Many technical developments resulting in substantially improved operating, maintenance, and construction methods are difficult to evaluate in terms of dollars saving. The more important of these include:

A. Low reactance synchronous condensers: The development and use of low reactance synchronous condensers having high-speed response characteristics and twice normal short-time overload capacity will be very valuable for stabilizing voltages on long transmission lines and will improve system-stability characteristics. Four of these machines have been purchased at substantially the same cost as machines of standard design. One of the machines has been delivered and is being installed on the system at the present time. These are believed to be the only machines with these characteristics.

B. River crossing airway lighting: Replacement of incandescent lamps by neon equipment at river crossing and other high-transmission structures requiring airway lighting facilities.

C. Aluminum alloy suspension clamps: Development, design, and application of aluminum alloy suspension clamps to replace steel clamps previously standard in the industry.

D. Preformed armor rods: Development and application of preformed armor rods for repair of line conductors damaged by conductor vibration, with resultant savings in maintenance costs and conductor replacements.

E. Use of helicopter: The use of helicopter for regular and emergency patrolling of transmission lines has been highly effective in reducing maintenance costs and decreasing the duration of outages. BPA is planning to extend its helicopter service to achieve maximum savings.

No attempt was made to evaluate the benefits from the foregoing group of development items.

III. ENGINEERING DEVELOPMENTS UNDER STUDY

Among the more promising developments in this category are the following:

1. 230-kilovolt submarine cable across Puget Sound: Extensive studies and engineering work by the Bonneville engineers have indicated the practicability of laying 230-kilovolt submarine cable across Puget Sound from Richmond Beach just north of the city of Seattle to President Point on the westerly shore of Puget Sound. The length of cable will be approximately 4½ miles The magnitude of this operation may be appreciated when it is considered that there is no 230-kilovolt cable service in the country today and the longest length of high-voltage submarine cable is less than 6,500 feet. This cable will assure the shortest route between Chief Joseph Dam and the Bremerton area and should provide reliable service to the highly important Bremerton Navy Yard. A transmission line over the shortest alternative route is approximately 90 miles longer than the one made possible by the submarine cable and the cost approximately $2½ million more. For this item, $250,000.

2. Reduction of incremental system loadings: A study has been undertaken to develop, by basic mathematical formulas, graphical methods, network analyzer, and other computing devices, basic standards and guides for achieving the most economical operating arrangements of the Federal power grid and related interconnected systems. This endeavor has as its objective the optimum coordination of the power resources and the transmission system to obtain the desired economies. Considering the large amounts of power involved and the high transmission losses encountered, the possible benefits of this study are highly alluring. No estimate is provided for this item.

3. Revision of State and National Safety Codes: It is the consensus of the BPA engineering staff that many provisions of the State and National Safety Codes applicable to high-voltage transmission are archaic and in need of revision. It is believed that a number of objectionable requirements of this code can be changed, particularly with regard to clearances and spacing of conductors, in a manner to

achieve substantial savings without significantly increasing hazards to safety. In this connection, BPA engineers have worked with the appropriate authorities in the State of Washington with the result that the code has been modernized to achieve these objectives. Contacts have been made or will be made with similar bodies in other States in the Northwest with this same useful purpose in mind. No estimate can be made for this item.

4. Low-cost high-voltage substantions: In the interests of economy, the Administration has been making continuous studies for the purpose of building relatively low-capacity, low-cost 230-kilovolt substations. The results in this respect have been gratifying to the extent that the Administration has included a number of this type of substation in its program. The first to be installed will be in eastern Oregon in the fall of 1952. These substations will have a capacity of 20,000 kilovolt-amperes each. A major benefit from this type of substation is that it will eliminate the necessity of building low-voltage transmission lines wherever connections can be made to the 230-kilovolt system.

While the savings will be substantial, no attempt is made to evaluate them because of the uncertainties of the construction program.

5. High-voltage load interrupters: BPA has actively worked with interested switchgear manufacturers to produce low-cost high-voltage switching devices that could under limited conditions eliminate the necessity of expensive circuit breakers. The results of this effort have been successful, with the result that 115,000-volt circuit interrupters are now available for light duty switching operations. There is good promise that a similar device will soon be available for 230-kilovolt switching.

Because of the uncertainties pertaining to this device, no attempt is here made to evaluate the savings resulting from its use.

OPERATION AND MAINTENANCE

Major items of increase for items of operations and maintenance result from additions to the transmission system. During fiscal year 1953 we will install 615 circuit-miles of transmission lines, 14 new substations, and substation capacity will be increased 964,500 kilovolt-amperes. The item of increase, however, which requires the largest portion of increase for operations and maintenance, will be the manning of microwave equipment which we have been constructing during the past 3 years. I have discussed with you in the past the importance of the microwave program to control of the vast grid system upon which the Pacific Northwest depends for its major source of power. The microwave equipment, which is independent of the transmission facilities themselves, provides the control and communications whereby it will be possible to obtain the greatest advantage out of the entire grid system of the Northwest with its increasing number of generating plants and expanded area of grid system coverage.

About 86 percent of the total increase requested for operation and maintenance will be applied to the direct system operation and maintenance work I have just described. The remaining 14 percent of the increase is for power-marketing and general administration activities.

The power-marketing activities of the Administration, which are concerned with the disposal at wholesale of large blocks of power, include very little of what is commonly thought of as selling effort. Instead, they consist almost entirely of necessary work in keeping our contractual relationships with our customers up to date, collecting and analyzing the basic information we need for planning the operation and extension of our transmission system, making the studies required for scheduling future generation to meet power requirements in the region, billing our customers for the power we sell and analyzing and adjusting our power rate schedules. This represents only the minimum amount of work required to permit us to run our business on a business-like basis and to efficiently plan extensions of our transmission system on a sound basis. The additional money we have asked for in the budget is needed to expand our studies, particularly of future loads and resources, so that we may keep the transmission investment to a minimum and plan the most economic power system for the Pacific Northwest region.

The remaining increase for operation and maintenance in fiscal year 1953 will provide for management planning, executive activities, and particularly administrative services relating to the increased system maintenance, operation and power-marketing activities of the Administration. The proposed increases in this activity will take care of major policy and program problems and workload situations arising out of increased programs, transmission system manning, and power marketing. Table IV analyzes the increase requested in relation to expansion of the system.

TABLE IV.—*Bonneville Power Administration—Analysis of increases for fiscal year 1953 operation and maintenance budget*

	Amount	Percent of increase in estimate	System percent increases
1952 appropriation	$5,358,439		
Add:			
1. Full increase in base due to annual salary pay increase.	204,000		
2. Full increase in hourly wages base due to collective bargaining agreement.	106,000		
Adjusted 1952 base	5,678,439		
1953 increases: Maintenance of lines.	83,000	11.7	18 percent increase in average structure miles of line to be maintained (4,400 to 5,194 miles). Extensions into new areas: Bandon to Gold Beach 51.5 miles; Spokane to Hot Springs 162.6 miles; Hungry Horse-Hot Springs-Anaconda-Silver Bow 237.8 miles; Maupin-Redmond 68.3 miles.
Substation maintenance	96,000	14.9	9 percent increase in number of subs (133 to 145); 24-percent increase in average kilovolt-ampere capacity to be maintained (4,273,440 to 5,298,305 kilovolt ampere).
System protection:			
Microwave communication.	171,000	137.0	159.3 percent.
Other communications	77,000	52.0	46.5 percent.
Relay	53,000	33.0	28.6 percent.
Metering	58,000	48.0	17.9 percent.
Subtotal, system protection.	359,000	64.8	
Other maintenance	39,000	13.3	Electric testing laboratory; engineering specification and inspection of materials, general maintenance engineering supervision.
Power scheduling and dispatching.	56,000	26.8	Subdispatching for closer coordination of and to economize in cost of substation operations. (See next item.)
Substation operation	85,000	7.1	9 percent increase in number of subs (133 to 145); 24 percent increase in average kilovolt-ampere capacity to be maintained (4,273,440 to 5,298,305 kilovolt-amperes).
Leased facilities	18,700	11.8	Use of other utility facilities to deliver power to BPA customers to maintain lowest over-all cost of power.
Other operating costs	36,000	17.1	Improve system engineering operating methods; general engineering and supervision of operations.
Power marketing	60,000	9.4	15.4 percent increase in customers (117–135) and 15.7 percent increase in points of delivery (268–310) requiring joint customer service planning, load estimating, contract preparation and billing; increased coordination required for power resources from new hydro projects; basic rate study and review for 1954.
General administration	89,000	9.3	
Total 1953	6,600,000	16.2	

SUMMARY OF OPERATIONS

In fiscal year 1951, the Administration marketed nearly 16½ billion kilowatt-hours of energy. The Columbia River power system provided over 58 percent of the entire power production of the Pacific Northwest in fiscal year 1951. The Federal system peak generation was 2,784,000 kilowatts on December 31, 1951. As the accompanying annual auditors' report shows, the Federal power system continues to be a paying concern. From the beginning of operations to June 30, 1951, the Administration's revenues totalled $225,073,739. From these revenues the Administration repaid to the United States Treasury all operating expenses, maintenance costs, depreciation expenses on all power facilities and interest at the rate of 2½ percent on its investment in power facilities at the two dams and on the transmission system. Net revenues remaining in fiscal year

1951 were $14,495,552, an increase of over $2,500,000 over 1950, bringing the cumulative total of net revenues during the Administration's operations to $69,139,613 as of June 30, 1951. Financial high lights of power operations to June 30, 1951, are as follows:

	Gross revenues	Net revenues
	Millions	*Millions*
1. Actual cumulative total to June 30, 1951	$225.1	$69.1
2. Actual fiscal year 1951	36.2	14.5
3. Estimates for fiscal year 1952: [1]		
(a) Last fall's estimate	36.6	12.3
(b) Current estimate	39.4	15.1
	1951	To June 30, 1951
4. Revenue per kilowatt-hour sold:	*Mills*	*Mills*
(a) Energy sales	[2] 2.370	2.429
(b) Miscellaneous revenue	.030	.059
(c) Total revenue	2.400	2.488
5. Costs (FPC account totals per audit) per kilowatt-hour sold:		
(a) Power generated and purchased	.588	.792
(b) Transmission	.851	.932
(c) Total	1.439	1.724
(d) Net revenues	.961	.764
(e) Total revenue (same as item 4 (c))	2.400	2.488

	Grand Coulee Dam	Bonneville Dam	Total
6. Generating costs, amount per kilowatt-hour generated for BPA at each dam:			
Fiscal year 1951, mills per kilowatt-hour	0.431	0.738	0.502
Total to June 30, 1951, mills per kilowatt-hour	.626	.830	.698

N. B.—Costs include all expenses for operation, maintenance, depreciation, and interest. Bonneville Dam data include payments to reclamation fund for river-regulation benefits from Grand Coulee storage, with such amounts being included as a credit in Grand Coulee's cost data.

7. Kilowatt-hour sales:	*Billions*
(a) Total to June 30, 1951	90.4
(b) Fiscal year 1951 [3]	15.1
(c) Estimate for fiscal year 1952	17.0
8. Federal investment (power) (June 30, 1951):	*Millions*
(a) Gross	[4] $583.2
(b) Repayment	[5] 214.8
(c) Net unpaid	368.4
9. Federal equity (net revenues of $69.1 million to date) may be proved as follows:	*Millions*
(a) Plant account	$457.8
(b) Less accrued depreciation	37.5
(c) Net	420.3
(d) Net of other assets minus other liabilities and reserves	17.2
(e) Subtotal	437.5
(f) Unpaid Federal investment (item 8 (c))	368.4
(g) Equity	69.1

[1] Improvement in 1952 estimate due to increased defense loads and good water year.
[2] TVA 1951 figure was 4.23 mills.
[3] TVA 1951 sales were 16.5 billions.
[4] Includes amounts for operation, maintenance and interest as well as construction. Interest item is $79.1 millions.
[5] Includes repayment of current expenses for operation, maintenance and interest as well as repayment of construction costs. See item 12 below.

10. Plant investment (construction costs, FPC accounting basis, including interest during construction on power portions) (June 30, 1951):

		Millions
(a) Total		$693.4
(b) Less nonpower:		
(i) Specific nonpower	$145.6	
(ii) Joint allocated to nonpower	89.9	
		235.5
(c) Power plant account		457.9

11. Rate earned on average balance of unpaid Federal investment (ratio of net revenues available for interest to average unpaid Federal investment):

	Percent
(a) 1949	5.68
(b) 1950	5.52
(c) 1951	5.91

12. Items 1 to 11, above, were based on the certified cost accounts kept in accordance with the FPC system of accounts for electric utilities (privately or publicly owned). The following data summarize cumulative payout results to June 30, 1951, and include reconciliations of the cost and pay-out accounts:

		Millions
(a) Total operating revenues (cost accounts)		$225.1
(b) Less accounts receivable, noncash exchange sales, etc		9.0
(c) Cash receipts returned to the Treasury		216.1
(d) Less advance payment on account of 1952 to Columbia Basin project, receipts transferred to BPA continuing fund and receipts netted against costs at Columbia Basin project		4.0
(e) Cash receipts applied to repayment of expenses and investment as of June 30, 1951		212.1
Expenses (exclusive of recovery of investment):		
(f) Operation, maintenance, etc	$61.5	
(g) Interest (at 2½ percent rate)	55.7	
(h) Miscellaneous income deductions, net	1.1	
(i) Total per cost accounts	118.3	
(j) Less major exchange account items and other adjustments of cost accounts to pay-out basis	7.1	
	111.2	
(k) Add expenses at Grand Coulee allocated to irrigation in cost accounts but repaid from power revenues	1.8	
(l) Add additional interest to meet 3 percent rate charged at Grand Coulee in pay-out accounts	4.1	
(m) Total per pay-out accounts		117.1
(n) Amount repaid on investment (pay-out accounts)		95.0

The repayment of $95.0 millions represented 23.2 percent of the total capital investment of $409.7 allocated to power to June 30, 1951. The breakdown of these totals by projects is:

	Repaid	Total power capital investment	Percent repaid
	Millions	*Millions*	
(o) Bonneville Power Administration	$54.8	$199.2	27.5
(p) Bonneville Dam	16.8	59.7	28.2
(q) Columbia Basin project (Grand Coulee)	23.4	150.8	15.5
Total	95.0	409.7	23.2

MANAGEMENT-IMPROVEMENT PROGRAM

In order to keep operating and administrative costs at a minimum and to improve the effectiveness of the Administration's operation, the Administration carries on continuously a management-improvement program. In the past and current year this program covers the following:

1. As a final step in completing the general reorganization of the Administration, field activities, including control and communications, operations and maintenance have been pulled together with load estimating and system-development work in area offices. This will provide better information on system development and customers' requirements, and more effective and economical utilization of manpower, materials, and facilities through closer and better integrated field supervision. Each operating division is continuing to analyze its work to see what additional activities can be simplified through further decentralization.

2. Development of the management-improvement program has continued during the fiscal year through the stimulation of supervisors to find ways and means to do their jobs better and more economically. Of major importance in

this connection has been the Administration's incentive-award program under which 30 awards for suggestions and efficiency have been made. These awards represent total first-year savings of more than $1,300,000. This amount includes technological engineering savings mentioned elsewhere.

3. Continued successful work has been carried on to develop interdepartmental and interagency relationships.

4. During the fiscal year, the program to obtain improved conservation and utilization of manpower has shown results. Intensive training of new engineers has substantially increased the productivity of these men during their first year. In addition, better management of personnel needs is being attained through a recently introduced system of a quarterly review of staffing requirements. Continued attention has been given to building employee morale and increasing the value of other employees to the Government through training and apprenticeship programs. The Administration has received noteworthy attention for its employment and utilization of the physically handicapped as evidenced by the following letter from the Chairman of the Civil Service Commission:

UNITED STATES CIVIL SERVICE COMMISSION,
Washington 25, D. C., January 10, 1952.

ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION,
Portland, Oreg.

DEAR SIR: It has just been brought to my attention that your establishment has been recently honored by the receipt of an award of merit from the President's Committee on National Employ the Physically Handicapped Week. This award, I know, is given only to those employers who have done an outstanding job in the employment of the physically handicapped.

As chairman of the Civil Service Commission I am well aware of the importance of Government establishments making full use of valuable services offered by trained handicapped applicants. Please extend my sincere congratulations to all personnel who have been responsible for this achievement.

Sincerely yours,

ROBERT RAMSPECK, *Chairman.*

5. Plans are under way to strengthen and simplify budget work. Improved advance planning for O. and M. requirements is one objective of these efforts. A further objective is to make greater use of the FPC system of accounts to make the budget process simpler and more businesslike.

6. Improved methods have been instituted for load estimating. In addition economic and engineering studies are under way to improve and further sharpen our customer service policies.

7. Progress has been made in the further development of construction and clearing contracts and in contractual relations. Additional standard construction specifications have been developed which will improve all phases of the construction bidding processes. Bid analysis is improved, and efforts to standardize our contract inspection and supervision have made it easier for contractors to bid on the Administration's work and have encouraged competition.

8. Further progress has been made in maintenance activities. A system of spare-parts control for line and substation maintenance now in effect will provide better utilization of parts, and will enable us to make inventories quicker, order spare parts on better schedules, and will improve spare parts management in all its aspects. The use of helicopters for line patrolling is proving more effective and economical than previous methods.

9. Design activities have been improved through such methods as the use of additional standard estimates and standard drawings for component parts of substations, as well as additional standard technical specifications for materials. Such standards simplify the work of design as well as procurement. Another development has been mobile spare transformer capacity which can be moved about, thus reducing the number of transformers needed and consequently the amount of investment for spare capacity. Aerial photogrammetry, as a survey technique, and the use of two-way radio communication by survey crews have saved manpower and simplified survey work. Increased utilization of the survey procedures and information of other agencies has reduced the costs of our preliminary surveys. Improved operations of field survey staffs have been achieved by combining advance reconnaissance with production survey work.

10. In the operation of the system, the initial decentralization of dispatching in one area is proving successful in meeting unusual local conditions. This will

provide valuable experience as a guide to further decentralization when conditions require it.

11. We are developing improved ways of purchasing materials. Specifically, an improved method of forecasting material needs is under development which will facilitate more effective and economical use of materials. In connection with this and other supply management functions, stock accounting has been strengthened and simplified. Improvements in material bids procedures are producing increased competition and lower bids, even in the case of some materials in short supply, and are facilitating bids by small business.

12. We are improving the planning of our nonelectrical buildings and our space utilization and management. Through these efforts, we were enabled recently to determine that a number of buildings originally felt to be needed were not needed when considered in relation to all factors. New procedures also provide for an advance program of scheduling building maintenance. We have reduced the number of regular building inspections through the use of check charts which enable inspections to be made by persons utilizing the building in their regular work.

13. We are giving intensive study to the improved utilization of equipment. Additional car pools have been established, and a transportation standards committee has been set up to enlist the participation of all parts of the Administration in the standardization and improved management of transportation and construction equipment. We are cooperating with other agencies in common problems in equipment use. Shop practices and layouts have been improved and are under continuous scrutiny for further improvements.

14. Accounting operations have been strengthened through the development of a procedure and systems staff to simplify further our accounting operations and increase their usefulness for management purposes.

15. Continuous attention is given to economies and standards in the use of reproduction methods, office supplies and equipment, paper, and forms.

16. There has been considerable achievement in technological engineering improvements in design, construction, operation, and maintenance of transmission facilities. These were submitted. (See p. 130.)

Senator HAYDEN. The committee will stand in recess until 10 o'clock tomorrow morning.

(Whereupon, at 11:55 a. m., Monday, April 21, 1952, the committee was recessed, to reconvene at 10 a. m., Tuesday, April 22, 1952.)